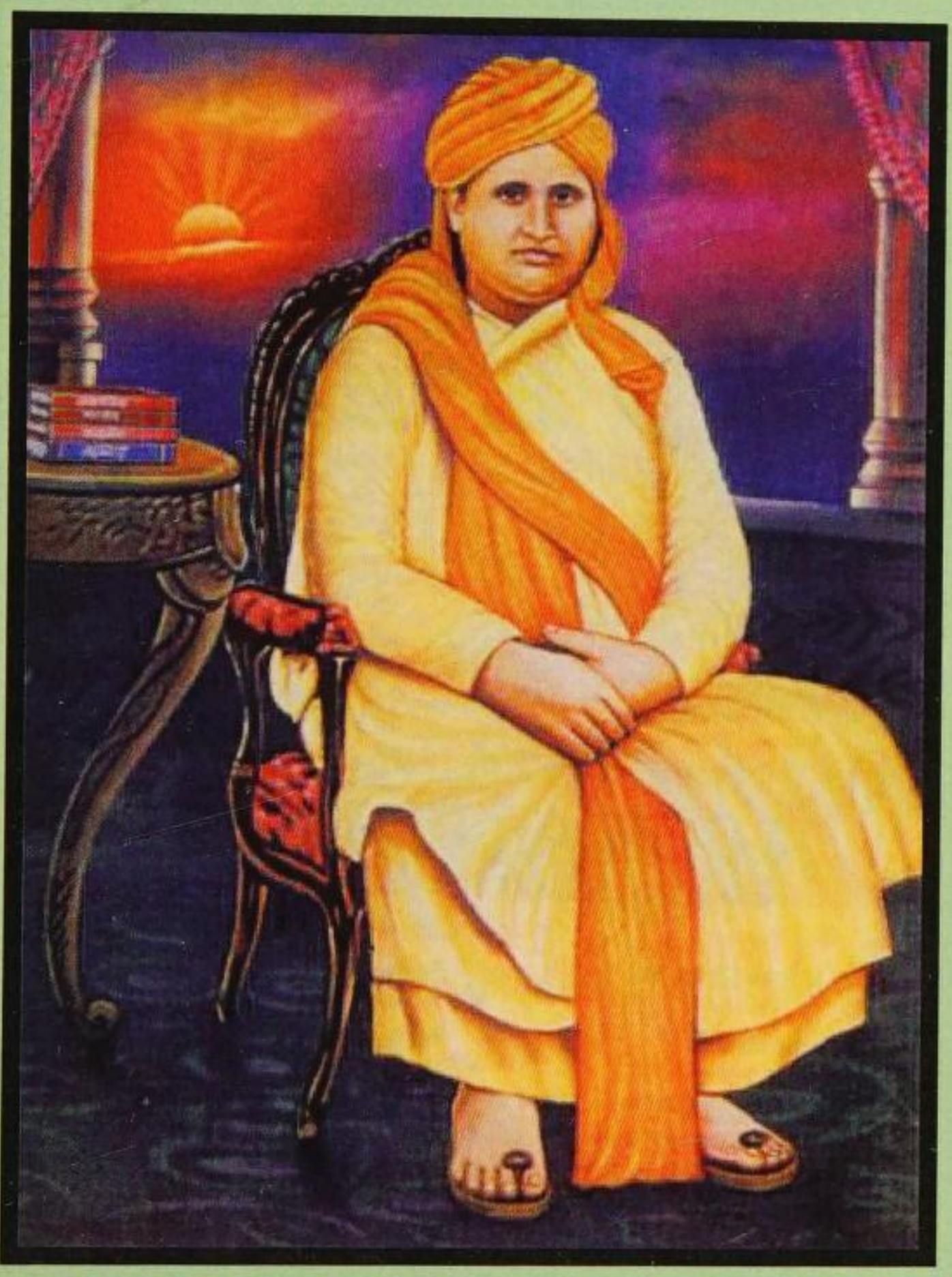

MAHARSHI DAYANANDA SARASWATI
Founder of Arya Samaj (1824-1883 A.D.)

World's Debt To India!

Niranjan Shah

An International Vedic Vision Publication

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World's Debt to India!

Niranjan Shah

An International Vedic Vision Publication
Sands Point, New York

World's Debt to India!
Niranjan Shah

PUBLISHED BY:

,
Dilip Doctor M.D., Dipika Doctor M.D.
Founders of International Vedic Vision
23 Hoffstat Ln. Sands Point, N.Y. 11050 USA

Disclaimer:

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CREATESPACE ISBN: 9781518603990
ISBN: 1518603998
LCCN:

Copyright: Niranjan Shah (nshah32@hotmail.com)

Book available at: International Vedic Vision
amazon.com,
nshah32@hotmail.com
Arshvidya Gurukulam Bookstore, Saylorsburg
PA, USA. And

$14.95 Other Major Retailers

World's Debt to India!

(What India gave To the World)

Dedicated

to

Maharshi Dayananda Saraswati

Founder of

Arya Samaj, Worldwide

International Vedic Vision Publication

Sands point, New York

About the author

Niranjan Shah, an engineer from Baroda, India, worked on large Irrigation, Steel and Housing Projects in various States of India from 1954 to 1960. From 1960 to 1978 he worked as consulting engineer, and valuer. He planned and executed first high-rise building and many famous high-rise buildings in Baroda, and named after his children Sandip, Sangita, Samir and Shital. He was a Chartered Member of Institute of Engineers (India) and Fellow of the Institution of Valuers (India).

His interests included Education, Publication, Literature, Social Services and Arts and Culture. He was involved in social services through the Rotary Club and Masonic Lodge. He was President of Sagar Education Trust, running high schools, and Vice-President of Sagar Publication Trust that published rare books. He gave talks on All India Radio. He was a Patron of Premananad Sahitya Sabha, a literary academy. On cultural and arts activities, he presented musical events, a few plays (with Sarita Joshi) and four movies with actors like **Sanjivkumar**, who was awarded National Best Actor.

He moved to the USA in 1978 and worked as consulting engineer in Ohio until 2000. His interest included providing shelters to homeless people through the Salvation Army, United Way and other institutions. His first book ***This is India*** was sponsored by BAPS at Cultural Festival of India in 1991 and was released by **Pramukh Swami Maharaj.** He wrote thirteen books as listed elsewhere.

In 2001 he began writing articles in Weekly Newpapers such as **India Tribune,** India Post, IndiaweeklyUSA, Voice of Asia, Gujarat Times in USA and ***Sandesh, Janmabhumi, and Navnit-Samarpan*** of Bharatiya Vidya Bhavan in India. His more than 600 articles were published, about 500 in under *A Letter From Grandpa* column.

He presented about 80 Power-point talks at Universities, Temples, Conventions, Conferences and Institutions, including one at United Nations, most of them paid. Readers of his articles asked for books.

Maharshi Dayananda Saraswati

Maharshi Dayanand Saraswati, a rejuvenator of the ancient Vedic tradition, was born on February 12, 1824 in the present-day State of Gujarat, India. At an early age, he left home, in search of **Truth**. He studied the Vedas and Sanskrit language under blind guru Swami Virjanand Saraswati who guided him towards his goal based on the original teachings of the Vedas. And "Back to Vedas" became the mission of his life.

He founded **Arya Samaj** at Bombay in 1875 and at Lahor (now in Pakistan) in 1877, an organization committed to reform (Indian majority) Hindu society. He was the first to give a call for political freedom – **India for Indians** – long before the Indian National Congress came into existence. Lokmanya Tilak led the freedom movement thereafter. Denouncing the deity-worship and other ritualistic practices prevalent in Hindu society at the time, he worked towards reviving the Vedic ideology. Dr. S. Radhakrishnan and Maharshi Aurobindo called him **"one of the makers of modern India".** Those who were influenced by his vision were Madam Cama, Pandit Guru Datt Vidyarthi, Barrister Vinayak Damodar Savarkar, Lala Hardayal, Madanlal Dhingra, Ram Prasad Bismil, Bhagat Singh, Mahadev Govind Ranade, Swami Shraddhanand, Mahatma Hansaraj, Lala Lajpat Rai, and Hargovind Sarda of Sarda act.

One of his most influential works is his book ***Satyarth Prakash,*** which contributed to the Indian independence movement and reform Hindu society.

He firmly believed in the infalliable authority of the Vedas. It can be said, since the time of Adi Shankaracharya, India never saw a more learned Sanskrit scholar, a deeper metaphysicisist, a more wonderful orator, and more fearless denunciator of ills than Maharshi Dayanand Saraswati.

Maharshi Dayanand did logical, scientific and critical analyses of other faiths, namely Christianity, Islam, Jainism, Shikhism and Buddhism in ***Satyarth Prakash.***

Great persons on Maharshi Dayanand Saraswati:

1. Maharshi Dayanand was a pioneer of freedom movement of India. (This was later taken over by Bal Gangadhar Tilak and Mahatma Gandhi.) – **Barrister Sardar Vallabhbhai Patel**, Home Minister of India, a great patriot who united India, and nearest aid of Mahatma Gandhi.

2. Wherever I move, I find footsteps of Maharshi Dayanand. Maharshi Dayanand founded a road to contact people when British ruled. – **Mahatma Gandhi**

3. When India becomes free, memorial of Maharshi Dayanand Saraswati will be tallest.
– **Annie Besant.** Former President of Indian National Congress).

(Forget tallest, unfortunately there is no great memorial raised by Govt. of India in name of Maharshi Dayanand's name.)

4. Maharshi Dayanand was the first soldier of freedom movement.– **Barrister Swatantyavir Vinayak Damodar Savarkar.**

5. Maharshi Dayanand Sarawati promoted (1). one language for the whole nation, (2). self-woven cloth (Khadi), (3). organized popular movement for freedom, (4). founding panchyats (self-rule), (5). uplifting of backward class, (Dalits), (6). national and social unity, (7). strong love for motherland, and (8). announcement of selfrule. – **Barrister Vithalbhai Patel,** Speaker of Parliament under British Rule.

6. If Mahatma Gandhi is the **Father of Nation,** Maharshi Dayanand is the **Grandfather of the Nation**. Maharshi is the pioneer of national freedom movement. – **Madabhushi Anant Shayanam Ayyangar,** speaker of Indian Parliament after Freedom.

7. Mahahrshi Dayanand was the pioneer of Nationalist freedom movement, after British Government settled after failure of first war of independence in 1857. – **K.M. Munshi,** founder of Bharatiya Vidya Bhavan, former Central Minister and Governor.

8. Maharshi Dayanand was an authority on Vedas. He wrote and spoke about Vedas, which proved that he was a great scholar of Vedas. – **F. Max Muller,** a German Sanskrit scholar under British employment, who took Vedas to West.

9. It was Maharshi Dayanand who provided spirit of firmness, and strength of a lion in poor body of India. - **Romain Rolland** a Nobel Laureate French philosopher.

10. Maharshi Dayanand believed that Arya is a Chosen race, India is a Chosen nation and Veda is a Chosen Knowledge. – **Ramsey McDonald,** a former Prime Minister of Britain.

11. Doubtless Swami Dayanand was a Rishi. Rishi ordered Indians of Aryavarta (India) to awake, get up, when time is ripe for new era. – **Paul Richard** French Author, and editor.

12. Swami Dayanand was a great man. I cannot even untie his shoe strings. – **A.O. Hume,** founder of **Indian National Congress.**

13. Dayanand found out keys for closed doors since ages. He opened mouths of closed streams. – **Maharshi Aurobindo.**

14. Maharshi Dayanand was a great scholar of our age, experienced sadhak, rishi, a great orator and a great patriot. – **Colonel Alcott, American** Founder of **Theosophical Society.**

15. Swami Dayanand was a social reformer, profound scholar and great fearless leader who had rendered valuable services through Arya Samaj movement for which India will remain indebted to him. He was a true nationalist by every test and a far sighted leader. It is amazing, how he anticipated so far back, those very things which Mahatma Gandhi later included in his constructive program and greatly emphasized the active struggle against foreign rule. With surprising foresight Dayanand propagated the ideals of having a national language, Harijan uplift, women's education, the use of hand woven cloth and Swadeshi goods which Mahatma Gandhi associated with the freedom struggle, fifty years later. All his life Dayanand dreamt of liberating India from foreign rule".

-- Dr. Rajendra Prasad, first President of Republic of India.

16. Mahatma Gandhi completed the work begun by Swami Dayanand. -- Dr. Keskar, Union Minister in Jawahar Lal Nehru's cabinet.

GREATEST LEADER OF INDIA, WHOM WE HAVE FORGOTTEN.

International Vedic Vision

(Founders Dilip Doctor MD and Dipika Doctor MD)
23 Hoffstot Ln. Sands Point, N.Y. 11050,

The International Vedic Vision Foundation, Sands Point, New York, publishers of this book, has published many books as listed here. Dilip Doctor M.D. is the founder President and Dipika Doctor M.D. is the secretary-treasurer of this tax-free foundation. The Foundation was formed in 1988 to make people aware of Vedic India's contribution to world civilization and to establish peace and harmony between followers of different faiths, keeping in mind younger generations. Foundation invites scholars for seminars held at their Maya Auditorium in Long Island. Foundation also sponsors publications.

Some books published by International Vedic Vision:

1. Vedic science journal from year 2000 till year 2010,

1. Indian Origin of Greece and Ancient world.
2. Indian origin of Mathemetics.
3. Vedic Theory of Origin of speech
4. New findings in Vedic Saraswati
5. India, Pioneer of World Civilizations,
6. Origin of Indo-European Languages,
7. Vedic Microbiology,
8. Origin of Roots of Judeo-Christianity.
9. Vedic Metereology.
10. Vedic Microbiology.
11. Dhanurveda, Indias's Art of Warfare in Ancient Times.
12. Indian Origins of Ancient Civilisations.
13. Life of Sri Virchand Raghavji Gandhi.
14. Indian Origins of Ancient Civilizations.
15. This is India: Mother India is the Mother of Us All.
16. India: The Birthplace of Human Speech.
17. World's Debt to India: What India gave to World.

International Vedic Vision invites Vedic and other scholars twice a year at their Maya auditorium as speakers. They perform Gayatri Yagnas also.

Scholars invited to speak at International Vedic Vision.

1.Josua Green of *Hare Krishna Movement* on Vedic Philosophy.

2.Swami Viditatmanand of ArshVidya Gurukul on Meditation.

3. Pravin Shah, a Jain Scholar on Principles and Life approach in Jainism.

4.Shri Chidanand Saraswati of Parmarth Niketan, on Releasing Stress. Publisher of *Encyclopedia of Hinduism*.

5. Swami Prakashananda, Founder of Barsana Dham on Vedic Culture.

6.Richard Thomson (Satpuda Das) on Astronomy in Vedas.

7.Stephen Knapp on Vedic Culture.

8. Michael Cremo on Upanishads and Sciences.

9. Yoga Seminar by Jagganpati Swami (Eddy Stein).

10. Niranjan Shah, Columnist on Vedic Heritage, auther and moderator.

11. Gayatri Yagnas with Fire Alter and Chanting of Vedic Mantras by a group of people and a Pandit conducting the ceremony, before the seminar.

12. Seminars 3 to 4 times a year with Vegetarian meals to the guests.

Foreword
by
Stephen Knapp
(Sri Nandanandan dasa)
Vedic Scholar, Author and Speaker

I first became acquainted with **Niranjan Shah** through his wonderful weekly column ***A Letter from Grandpa*** in **India Tribune.** I have subscribed to that newspaper for years, and always looked to see what new things Mr. Shah had written about, researched, places he visited, or new findings he had discovered about India. Being an avid researcher and writer about India myself, his articles always piqued my interest, letting us know aspects of India that we had never heard about before, or, for some of us, were beginning to forget.

Through these articles, he has also acquired what you could call a wide fan base, with many readers who like to follow his work.

Later, I met Niranjan Shah at gatherings and conferences. I also encouraged him to write his findings in a book, or even several books. That way his readers could easily have something substantial to read about the work he has done, and he could have something that could contribute to his legacy of research.

So it is with great pleasure and happiness that I can help introduce this new book of his for his readers, and for people like myself that love to get absorbed in this kind of research on the culture of

India.

The nice thing about this book is it provides his readers with the same kind of easy, conversational style of writing that he has always given in his column. It is not overly intellectual that drives one to boredom, but it simply gets to the heart of the matter. And like his articles, this book will bring to light different aspects about India on how important it was to the development of society and the progress of civilization.

Basically, this book helps show that without the sophisticated nature of India and its people in ancient times, much of what we take for granted today may never have happened or been invented. In this way, we should appreciate **India for all it has given to humanity, from its high-thinking philosophy and spirituality, its technological and mathematical developments, its maritime advancements, all the way to its colorful culture and people. Hari Om - Stephen Knapp**

Find more about Stephen Knapp and his books, free ebooks, research, and numerous articles and photos: at: http://www.Stephen-Knapp.com

Some books by Stephen Knapp:

1. The Secret Teachings of the Vedas:The Eastern Answers to the Mysteries of Life.
2. The Vedic Prophecies: A New Look into the Future.
3. How the Universe was created and Our Purpose In It.
4. Proof of Vedic Culture's Global Existence
5. Facing Death: Welcoming the Afterlife.
6. The Key to Real Happiness.
7. Toward World Peace:Seeing the Unity Between Us All.
8. Destined for Infinity.
9. Yoga and Meditation:Its Real Purpose and How to Get Started.
10. Avatars, Gods and Godesses of Vedic Culture.
11. The Soul: Understanding Our Real Identity.
12. Seeing the Spiritual India: A Guide to Temples, Holy Sites, Festivals and Traditions.
13. The Heart of Hinduism.
14. Reincarnation and Karma.
15. Vedic Culture:The Difference It can Make in Your Life.
16. Crimes Against India:And the Need to Protect its Ancient Vedic Tradition.
17. The Power of Dharma:
18. Prayers.

Niranjan Shah's Other Publications:

English Sponsored by

1. **This is India C**ultural Festival of India Released by PramukhSwami Maharaj in 1991.
2. **Historicity of Ramayan** Ramayan Katha N.Y.USA and released by Morari Bapu in 1992.
3. **Shri Krishna, A Historical Descent** Govardhan Temple released by Goswami Indirabetiji 1993.
4. **Vegetarianism** JAINA Convention, Pittsburgh realesed by former Chief Minister Sundarlal Patwa in 1994.
5. **Spice Trade Story and India** McCormick & Co. group, released by Ed Jordon in 1995.
6. **Vegetarian Way of Life** Seventhday Adventists. Released by Elder John in 1996.
7. **Welcome Death** R. R. Sheth and Co. 1999.
8. **Ramayan Ek Itihas** R.R. Sheth and Co. in 1997
9. **Shri Krishna Ek Aitihasik Avatar** R.R. Sheth and Co in 1998.
10. **Mrutyu nu Swagat Karie** R.R. Sheth and Co. in 2000.
11. **Indian Origins of Ancient Civilizations. (Egyptian, Sumerian, Greek, Chinese, American)**
12. **This is India! Mother Indiia is Mother of Us All.**
13. **India: The Birthplace of Human Speech!**

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Articles published by Niranjan Shah:

About 500 articles published, mainly in **India Tribune.** Articles also appeared in India Post of California, in IndiaweeklyUSA of New York, in Voice of Asia of Texas in English. In ***Gujarat Times***, ***Gujarat Darpan*** **in USA and in** ***Sandesh***, ***Janmabhumi***, ***Navanit-Samarpan*** **of** ***Bharatiya Vidya Bhavan*** **in India** in Gujarati.

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4. Spiritual Heritage.
5. Practical Heritage.
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7. Arts.
8. Sciences.

9. Destruction.

This appeared in Times of India of February 27,2012:

"India will be the world's third largest economy by (the year) 2030 but its energy demand will slow down to 4.5 per cent, global energy giant BP plc said recently."

BP's chief economist Christof Ruhl said:

"By 2030 China and India will be the world's largest and third largest economies and energy consumers, jointly accounting for about 35 per cent of global population, GDP and energy demand. There would be no surge in energy demand as India industrializes. Demand growth slows to 4.5 per cent per annum (vs. 5.5 per cent in 1999-2010) as improvements in energy efficiency partly offset the

energy needs."

Bill Gates, Microsoft chairman, said at the celebration of 50 golden years of Indian Institute of Technology by IITians at Silicon Valley:

"*India is a super power of human talent*". called IITians as India's powerhouse of knowledge.

India has made decent progress in several areas during last 60 years. India has produced world-class scientists, engineers, journalists, soldiers, bureaucrats, politicians and doctors. India has sent satellites and rockets into space. India has increased the number of doctors tenfold, and life expectancy has increased to around 70 years. India has built about 1.25 million miles of new roads, and has multiplied steel production by over 50 times and cement production by about 20 times. India has increased her exports from few million dollars to more than 125 billions.

From being a perennial importer of grains, India became a net exporter of food grains 10 years ago. Coming from a generation that experienced an acute shortage of milk, today India has become the largest producer of milk in the world.

India's hard currency reserves have gone up from a mere $1.5 billion in 1991 to over $220 billion today. The reforms gave confidence to businessmen and entrepreneurs to dream big, create jobs, enhance exports, and acquire companies abroad.

India's programs have made possible successful utilization of nuclear energy in defense, power generation, medicine and allied areas. Her peaceful use

of nuclear energy has raised India's prestige as a mature and responsible nation.

India's information technology exports grew from a mere $150 million in 1991-92 to $31.4 billion in 2006-07, and are projected to reach $60 billion by 2011. The Indian IT industry is unique for many reasons.

What a remarkable story of how the people and the government can work together to achieve what was once thought impossible.

2. Antiquity, continuity and contribution.

India's civilization is very ancient and its antiquity is claimed as millions of years. It has seen many Ice ages. After every Ice Age, sages of India have brought back her past civilization. India is a highly civilized nation – a nation, which developed a rich culture much earlier than any nation of Europe and has never lost it.

Lucille Schulberg, editor of ***Historic India*** of Time-Life Books, wrote:

"Archeologists and anthropologists now know that the beginnings of civilization in India are nearly as old as civilization itself."

This ancient civilization of India is different from those of Egypt, Mesopotamia (Iraq) and Greece. Dr. Basham, Professor of Asian Civilization in the Australian National University, Canberra, Australia, wrote:

"India has the oldest continuous traditions in the world. This ancient civilization of India is different from those of Egypt, Mesopotamia (modern Iraq) and Greece, other ancient civilizations."

An average person in Egypt or Iraq or Greece has no knowledge of the culture of his forefathers. On the other hand, India's ancient traditions have been preserved. It is not surprising to see an Indian, chanting the same Vedic prayers and same ritualistic Vedic Mantras at wedding today, which his ancestors did more than 5000 years ago.

Professor A.L. Basham wrote in ***Wonder that Was India:***

"India's contribution to the world's cultural stock has already been very large. This contribution tends to go unnoticed because much of it did not go directly from India to the West."

Philip Rawson from Oxford, England, an English Indologist wrote in ***Asiatic India***:

"Westerners may find it hard to believe, but, India's culture, literature and art has produced more major works of art and intellect than the whole of European tradition."

Lecturer Jabez T. Sunderland wrote in ***India In Bondage:***

"India, early created the beginnings of nearly all the sciences, some of which, it carried forward to remarkable degrees of development, thus leading the world."

India is receiving Nobel prizes in our own time for researches in sciences. India has produced great literature and long epics in past. India has produced great philosophical systems; and its creative power was seen in religion, in which development of great creeds – Hinduism, Buddhism, Jainism and Sikhism provided a record that no other culture has ever matched.

English historian H.G. Rawlinson wrote in ***Short Cultural History of India***:

"Today when India is once again emerging, with that persistent vitality, which has been her characteristic through ages, it is more than ever incumbent on all of us to realize the greatness of her past achievements in religion, art, literature, and sciences, all the elements of civilization. Western people in general have been singularly blind to the significance of India's contribution to the world-culture."

Professor Stanley Wolpert of University of California, LA wrote in ***India***:

"Surprisingly, however, few Americans have much more than a superficial understanding of India's

great deep-rooted civilization."

Will Durant wrote in ***Our Oriental Heritage:***

"Nothing should more deeply shame the modern student, than the inadequacy of his acquaintance with India".!

3. A Chosen Land!

India is once more emerging from the eclipse of foreign invasion of more than a thousand years. India's heritage and civilization are responsible for this persistent vitality. Divinity has special favors for the land of India.

The great German philosopher Arthur Schopenhauer had prayed:

"If there is existence of God, I pray that my next birth should be in India."

For centuries, India's landscape, its sounds and smell, its people, have stimulated the imagination of Westerners, causing them often to marvel.

George Constable, editor of Time-Life Books wrote in ***Library of Nations – India:***

"India can still the traveler's heart and brand his soul like no other country."

Great American author, Mark Twain was sent to India in 1896 by Life magazine to describe India.

Library of Nations – India quoted him saying:

"So far as I am able to judge, nothing has been left undone, either by man or nature, to make India the most extra-ordinary country that the sun visits on his round. Nothing seems to have been forgotten, nothing overlooked. ... Always when you think you have come to the end of her tremendous specialties and have finished hanging tags upon her ... like the Land of Giant Illusions, the Land of Stupendous Mountains, and so forth, another specialty crops up and other tag is required. It was best to throw away the labels and call it simply the ***Land of Wonders."***

These wonders have been described by writers ever since the Greeks, the first ambassadors of Western civilization reached the country in the fourth century B.C. The travelers have left us India as a series of isolated scenes, all true but only fractions of a greater truth.

Sanskritist German scholar Max Muller wrote in ***What India can Teach Us?***

"If I were to look over the whole world to find out the country most richly endowed with all the wealth, power, and beauty that nature can bestow – in some parts, a very paradise on earth – I should point to India."

In the Western countries, the land was rugged and hard because of severe climatic conditions and constant snowfall. People had to train themselves to

fight the unrelenting Nature and procure from her whatever was required for their self-preservation. Conquest of Nature became a fundamental trait. In sharp contrast, the East provided land with plenty and prosperity. With the slightest effort the land yielded abundance of flowers, fruits, and vegetation. The rivers were full and springtime flourished for many months in a year. In such harmonious expression of life, everywhere people followed Nature and quite naturally developed a culture based on *serving and giving* instead of *fighting and procuring*. Thus materialism took roots in the West and the idea of conquest was established, while a culture emanating peace, tranquility and love developed in India.

German Professor Arnold Ludwig known as Heeren stated in *Historical Researches,* Volume II:

"India is the source from which not only the rest of Asia but the whole Western World derived their knowledge and their religion."

Prichard James Cowles, a physician and ethnologist, wrote in ***Eastern Origin of the Celtic nations:***

"Aryavarta (Ancient India) was the holy land of the Brahmans (Vedic scholars), the country lying between the Himalayas and Vindhya mountains, which was the ancient abode of the Hindoos. There, the Hindoos had the seat of their early existence five and twenty centuries before the Christian era, and thence they appear gradually to have spread."

4. Spiritual Heritage.

Professor Huston Smith of Syracuse University, New York, wrote in ***Spiritual Heritage of India:***

"Spiritual heritage of India is one of the world's standing miracles. It would rank among the greatest human achievements, were it not that 'achievement' is not really the right word."

Around the middle of this century *Arnold Toyanbee* the famous English historian predicted:

"At its close the world would still be dominated by the West, but that in the 21st century, India will conquer her conquerors (culturally)."

Toyanbee's was addressing the Philosophical Society of Edinburgh University in November 1952. In 1970, he said:

"It is already becoming clear that a chapter which had western beginning will have to have an Indian ending if it is not to end in self-destruction of the human race. If the human race has to be saved, it has to embrace the Hindu (Indian) way."

Lucille Schulberg, editor of ***Historic India***, published by Time-Life Books wrote:

"Hinduism (Vedic teachings) seems to have

given the people of India extraordinarily satisfactory answers to questions that have concerned men since they began to think: What is man? what is nature? What is God? Why does man live? How should he best live with himself, with other men, with the mysteries of nature and the cosmos? These are hardly questions that occupy the daily thought of people in any country, but they are questions whose answers help to form the culture of the country and affect the least sophisticated person in it. India's indigenous answers to questions about the universe and humanity have permitted millions of people to come to terms with existence and to understand each other in a manner that is ***one of the world's greatest wonders."***

About this wonder of *Hinduism* (Vedic teachings) Fredrick Max Muller, German Sanskrit scholar wrote:

"It is astounding that such a system as Vedant should have been slowly established by the indefatigable and intrepid thinkers of India, thousands of years ago, a system that even now makes us feel giddy, as in mounting the last steps of the swaying spire of the ancient gothic cathedral."

This system of Vedant, coming from the breath of the Eternal and experienced by Indian spiritual practitioners is the basis of spiritual heritage of India.

5. Practical Heritage:

Besides spiritual gifts of vast literature of philosophy, theology, religions, and Vedas, a spiritual manual for living life, India has given many practical gifts.

(a). Stanley Wolpert, Professor of History at University of California LA wrote in ***India***:

"All of us, who wear cotton cloth, use the decimal system, enjoy the taste of chicken, play chess or roll dice, and seek peace of mind or tranquility through meditation, are indebted to India. Indians taught us to love mangoes and elephants, to stand on our heads for good health, to believe in the coexistence of contradiction, and to appreciate the beauty and universal possibility of nonviolence."

(b). A.L. Basham, Professor at the Australian National University, Canberra, wrote in ***The Wonder That Was India:***

"The whole of South-East Asia received most of its culture from India. Northwards Indian cultural influence spread through Central Asia to China. The whole of the Far East is in India's debt for Buddhism, which moulded the distinctive civilizations of China, Korea, Japan and Tibet. As well as her special gifts to Asia, India has conferred many practical blessings on the world at large; notably rice, cotton, the sugar

cane, many spices, the domestic fowl, the game of chess, and most important of all, the decimal system of numeral notation. India's contribution to the world's cultural stock has already been very large, and it will continue and grow as her prestige and influence increases."

(c). Will Durant, American authority on civilization wrote in ***Story of Civilization: Our Oriental Heritage*:**

"It is true that even across the Himalayan barrier India has sent to us such questionable gifts as grammar and logic, philosophy and fables, hypnotism and chess, and above all, our numerals and our decimal system. But these are not the essence of her spirit; they are trifles compared to what we may learn from her in the future. As invention, industry and trade bind the continents together, or as they fling us into conflict with Asia, we shall study its civilizations more closely, and shall absorb, even in enmity, some of its ways and thoughts. Perhaps, in return for conquest, arrogance and spoliation, India will teach us the tolerance and gentleness of the mature mind, the quiet content of the unacquisitive soul, the calm of the understanding spirit, and a unifying, pacifying love for all living things."

(d). William Harten Gilbert, a Smithsonian scholar and specialist in Sociology and Anthropology, of Legislative Reference Service, in Library of Congress wrote in ***Peoples of India*:**

"In the history of human culture the contribution of

the Indian peoples in all fields has been of the greatest importance. From India we are said to have derived domestic poultry, shellac, lemons, cotton, jute, rice, sugar, indigo, the buffalo, cinnamon, ginger, pepper, cane sugar, the games of chess, parchesi, polo, the zero concept, the decimal system, the basis of certain philological concepts, a wealth of fables with moral import, an astonishing variety of artistic products, and innumerable ideas in philosophy and religion such as asceticism and monasticism, and System of Buddhism. Primitive peoples throughout Oceania and southeastern Asia show many indications of Indian influences, as in the caste systems of Polynesia or the mythic dramas of Bali."

There are many other practical gifts to the world from India, not mentioned by these authors, but listed here to make India the Mother of All of Us All.

Because of spititual and practical heritage of India, India has contributed to the world like no other country.

6. Contribution.

India's contribution to civilization has stimulated the imagination of the scholars of the world, causing them to marvel. Writing about these gifts of Vedic tradition to India by Divinity, Nobel Prize-winner Maurice Maeterlinck wrote in ***The Great Secret***:

"This tradition attributes the vast reservoir of

wisdom that somewhere took shape simultaneously with the origin of man, or even if we are to credit it, before his advent upon this earth, to move spiritual entities, to beings less entangled in matter."

He agreed that we cannot tell how this Vedic tradition of India came into being, and added:

"When we become aware of it, we find it already complete in its broad outlines, its main principles. Not only is it complete, but, the farther back we go the more perfect it is, the more unadulterated, the more closely related to the loftiest speculations of our modern agnosticism. It presupposes a previous civilization, whose duration, in view of the slowness of all human evolution, it is quite impossible to estimate. The length of this period might in all probability be numbered by millions of years."

Because of this gift by Divinity to chosen land of India, India could become mother of the world's civilization.

Mark Twain, most popular American author wrote in ***Following the Equator*:**

"This is India: cradle of human race, birth place of human speech, mother of history, grandmother of legend, great-grandmother of tradition, whose yesterdays bear date with the moldering antiquities of the rest of the nations. India had the start of the whole world in the beginning of things. She had the first civilization; she had the first

accumulation of material wealth; she was populous with deep thinkers and the subtle intellects; she had mines, and woods, and a fruitful soil."

Will Durant, American Pulitzer-award winning authority on civilization declared in ***The Case for India***, that Mother India in many ways Mother of Us all.

India has contributed much more than what is described by Stanley Wolpert, A.L. Basham, Will Durant, Mark Twain, and William Harten. These contributions are concept of zero, algebra, arithmetic, geometry and trigonometry, numerals, decimal system, place-value system, handling of numbers, science of numbers, counting, method of calculations, and heat, light and sound theories of physics, concept of Time, mass and energy, atomic theory, astronomy, motion of earth and moon, astrology, earth-quake and meteorology, age of earth, world chronology, cosmology, alphabet, grammar, language, literature, fables, poetry, laws, epics, dramas, governments, constitution, city-administration, self-government, democracy, military science, metempsychosis, morals, medical science, surgery, pharmacology, arts like sculpture, painting, music, games, martial arts, government, constitution, law, logic, religion, music, aeronautics, building massive structures, engineering, surveying, town-planning, brick-making, brick-construction, sanitation, public drainage, architecture, sculpture, cave temples, weaving, cotton, gold, diamond, dyes, ornaments and jewelry, ivory, cast iron, steel, glass, iron bars, rotation of crops, glass for

windows, gold and silver brocades, textile fabrics, embroideries, enamel, furniture, culture, rice, sugarcane, many spices, game of chess, domestic poultry, shellac, lemons, jute, sugar, indigo, the buffalo, cinnamon, ginger, pepper, Pachisi, Polo, the basis of certain philological concepts, an astounding variety of artistic products, and innumerable ideas in philology and religion such as asceticism and monasticism, gravitation, law of conservation of energy, molecular theory, chemistry including atomic structure of matter, sciences like space and time, Theory of Relativity, idea of evolution, circulation of blood, surgery, explosives, airplanes, missiles, yoga, psychological truths, phonetics, philology, laser, space-ships, and theory of creation.

7. Arts.

Rev. Jabez T. Sunderland, an American author of ***America and World Brotherhood*** wrote in ***India in Bondage*:**

"India early created the beginning of nearly all of the sciences, some of which she carried forward to remarkable degrees of development, thus leading the world. India has produced great literature, great arts, great philosophical systems, great religions, and great men in every department of life-rulers, statesmen, financiers, scholars, poets, generals, colonizers, ship-builders, skilled artisans and craftsmen of every kind, agriculturists, industrial organizers and leaders in far-reaching trade and commerce by land and sea."

People of India, having vast and varied industries, created this wealth. Nearly every kind of manufacture or product known to the civilized world—nearly every kind of creation of Man's brain and hand, existing anywhere, and prized either for its utility or beauty—had long, long been produced in India. Added Jabez Sunderland:

"India was a far greater industrial and manufacturing nation than any in Europe or than any other in Asia. Her textile goods - the fine products of her loom, in cotton, wool, linen, and silk - were famous over the civilized world; so were her exquisite jewelry and her precious stones, cut in every lovely form; so were her pottery, porcelains, ceramics of every kind, quality, color and beautiful shape; so were her fine works in metal iron, steel, silver and gold. She had great architecture - equal in beauty to any in the world. She had great engineering works. She had great merchants, great businessmen, great bankers, and financiers. Not only was she the greatest ship-building nation, but she had great commerce and trade by land and sea which extended to all known civilized countries."

H.M. Hyndman (1842-1921), an eminent British publicist, wrote:

"Many hundreds of years before the coming of the English, the nations of India had been a collection of wealthy and highly civilized people, possessed of a great language with an elaborate code of laws and social regulations, with exquisite artistic taste in

architecture and decoration, producing conceptions which have greatly influenced the development of the most progressive races of the West."

Beatrice Pitney Lamb, former editor of the ***United Nations News,*** first visited India in 1949 on an assignment for the Carnegie Endowment for International Peace, wrote in her book ***India: A World in Transition:***

"In addition to the still visible past glories of art and architecture, the wonderful ancient literature, and other cultural achievements of which educated Indians are justly proud, the Indian past includes another type of glory most tantalizing to the Indians of today—prolonged material prosperity. For well over a millennium and a half, the Indian subcontinent may have been the richest area in the world."

General Joseph Davey Cunningham (1812-1851), author of ***A History of the Sikhs*** wrote:

"Mathematical science was so perfect and astronomical observations so complete that the paths of the sun and the moon were accurately measured."

As mentioned in ***Effects of Colonization on Indian Thought*** by Michel Danino:

"A German or French or English child will be taught something of Homer's Iliad and Odyssey, because they are regarded as the root of European culture and somehow are present in European

consciousness today. But India's Epics a hundred times richer and vaster in human experience, a thousand times more present in India's consciousness will not be taught to an Indian child."

Count Louis Harmon **Cheiro** (1866- 1936) asserted:

"Long before Rome, Greece or Israel was even heard of the mountains of India point back to an age, of learning beyond, and still beyond. From the astronomical calculations that the figures in their temples represent, it has been estimated that the Hindu understood the precession of the Equinoxes centuries before the Christian era."

Friedrich Creuzer (1771-1858), a German philologist and archeologist, wrote as quoted in *India: The Mother of Us All* by Diwan Chaman Lal:

"If there is a country on earth which can justly claim the honor of having been the cradle of the human race or at least the scene of primitive civilization, the successive developments of which carried into all parts of the ancient world and even beyond, the blessings of knowledge which is the second life of man, that country assuredly is India."

The Fourth Caliph, Ali bin Abi Talib (656-661), was quoted in ***Hindu Muslim Cultural Accord*** by Syed Mohamud:

"The land where books were first written and from where wisdom and knowledge sprang is India."

Friedrich von Schlegal, German philosopher and author affirmed:

"India is not only at the origin of everything, she is superior in everything, intellectually, religiously, or politically and even the Greek heritage seems pale in comparison. Here is the actual source of all languages, all the thoughts and poems of the human spirit; everything, everything without exception comes from India."

8. Sciences.

Foreigners,who invaded India and entered India and found a culture much higher than the one they had, they readily accepted Indian culture and made their place in the structure of Indian society. Then about a thousand years ago, a new class of religious fanatics attacked India. History shall never be able to do justice to Indian culture and sciences, for ignorance and fanaticism of these new invaders, destroyed her great achievements. The centers of cultural and scientific study, temples, along with libraries, schools and universities were destroyed; scholars were massacred for a period of about thousand years. Then a new class of invaders came in the form of traders. They made India their colony. But scholars amongst them could see what India had to offer.

Thomas Munro, a distinguished Governor of Madras, agreed that (in ***India in Bondage***):

"If civilization is to become an article of trade between the two countries, I am convinced that the country (England) will gain by import cargo."

J.A. Spender, editor of ***The Westminster Gazette*** declared:

"There is no Eastern country which has so many talented men in so many walks of life as India."

The English Vice-Chancellor of the Calcutta University said in convocation:

"Masterpieces of thought and language were produced in this country at a time when our ancestors as Englishmen were little better than savages."

Sir Monier Williams pointed out that for *Algebra also the Arabs were indebted to the Hindus.* Elphinstone has pointed out that the geometrical skill of the Hindus is shown among other forms by their demonstrations of various properties of triangles, some of which were unknown in Europe till published by Clavius.

Colebrook pointed out:

"The applications of Algebra to astronomical investigations and geometrical demonstrations is also the invention of Hindus and their manner of concocting is seen even now entitled to administration. The credit of the principle of Differential Calculus is

generally claimed by the Europeans, but it was known to the Hindus centuries ago as it has been referred to in various places by Bhaskaracharya, one of the greatest mathematician of the world."

Professor MacDonnell observes in his book ***A History of Sanskrit Literature:***

"In sciences too, the debt of Europe to India has been considerable. There is in the first place, the great fact that the Indians invented the numerical figures used all over the world. The influence which the decimal system of reckoning, dependent on those figures has had, not only on mathematics but on the progress of civilization in general, can hardly be overestimated."

Dr. Seal wrote:

"The astronomy and mathematics were not less advanced than those of Tycho Brahe, Carden and Fermat. Astronomy was equal to that of Vasalius, the Hindu Logic and methodology more advanced than that of Ramus and equal on the whole to Bacon's; the physio-chemical theories as to combustion heat, chemical affinity, clearer, more rational and more original than those of Von, Helmont, or Stahl; and the grammar whether Sanskrit or Prakrit, the most scientific and comprehensive, in the world before Bopp, Rask and Grimm. This fact should not be anyhow ignored that Nyaya of Gautam and Vaisheshika of Kanad do not deal only with methodology of sciences but also elaborately dwell upon the concepts of mechanics, physics, and

chemistry."

Will Durant, traveled to and throughout India and was addressing the Western population in his book ***Case For India*** when he declared:

"Mother India, in many ways, is the Mother of us, all."

American lecturer Jabez T. Sunderland, author of ***India in Bondage,*** who lived in India for many years, wrote:

"India created the beginnings of all sciences and arts and that she carried some of them to a remarkable degree of development, thereby leading the world."

India had scientists from the beginning of history and Indian scientists are winning Nobel Prizes today. French scholar Buffon elaborated a coherent theory that only scholars of ancient India had preserved the old learning from the creators of science, of arts, and of all useful institutions. Other French scholars, including Voltaire, had suggested that sciences were more ancient in India than in Egypt. French astronomer Jean Baily asserted that all sciences have come from the banks of Ganges. Russia-born great philosopher Immanuel Kant, father of modern philosophy, who placed the origin of mankind in Himalayas, argued that our arts like agriculture, numbers, the game of chess, etc., came from India.

German scholar J.G. Herder prompted to seek

affiliation with Mother India. Another German scholar Friedrich Schlegal declared that Egyptian civilization was the work of a group of Indian missionaries.

Jacolliot, in his ***Bible in India*** wrote:

"Astonishing fact! The Hindu Revelation (Vedas) is of all revelations the only one whose ideas are in perfect harmony with modern science, as it proclaims the slow and gradual formation of the world."

Great American astrophysicist of our time, Carl Sagan said in ***Cosmos***:

"The Hindu religion is the only one of the world's great faiths, dedicated to the idea that cosmos itself undergoes an immense, indeed, an infinite number of deaths and births. It is the only religion in which the time scales correspond to those of modern cosmology."

Sir William Hunter, famous English obstetrician, educator, and medical writer, pointed out that:

"The surgery of the ancient Indian physicians was bold and skilful. They conducted amputations; practiced lithotomy; performed operations in the abdomen and uterus, cured hernia, fistula, piles; set broken bones and dislocations. A special branch of

surgery was devoted to rhinoplasty, or operation of improving deformed ears, noses and forming new ones, a useful operation which European surgeons have now borrowed."

These sciences included from alphabet to atom; from grammar to language; from logic to astronomy, from arithmetic to geometry to trigonometry; hygiene, physics, and chemistry; architecture, town planning and engineering; sculpture and painting; music, dances and dramatics; medicine and dentistry to surgery. And all these sciences were developed worshipping the Absolute. For ancient Indians, everything was science and science, a part of a body of Eternal Truth, Absolute Truth or Sanatan Dharma.

What happened to all these achievements? Here is an explanation by a Muslim writer.

9. Destruction.

Rizwan Salim, a reviewer of New York Tribune, Capitol Hill reporter, and assistant editor of American Sentinel wrote an article – What Islamic Invaders did to India! – Which was published in Hindustan Times:

"Savages at a very low level of civilization and no culture worth the name from Arabia and West Asia, began entering India from the early 7th century onwards. Islamic invaders demolished countless Hindu temples, shattered uncountable sculptures and idols, plundered innumerable palaces and forts of Hindu kings, killed vast number of Hindu men and carried off Hindu women. The alien Muslim marauders destroyed the historical evolution of the earth's most mentally advanced civilization, the most richly imaginative culture, and the most vigorously creative society.

"It is clear that India at the time, was the earth's richest region for its wealth in precious and semi-precious stones, gold and silver, religion and culture, and its fine arts and letters. Tenth century Hindusthan was also too far advanced for its achievements in the realms of speculative philosophy and scientific theorizing, mathematics, and knowledge of nature's workings. Medieval India, until the Islamic invaders destroyed it, was history's most richly imaginative culture.

"Look at the Hindu art that Muslim iconoclasts severely damaged or destroyed. Ancient Hindu

sculpture is vigorous and sensual in the highest degree – more fascinating than human figural art created. Ancient Hindu temple architecture is the most awe-inspiring, ornate and spellbinding architectural style found anywhere in the world. Their minds filled with venom against the idol-worshippers, the Muslims destroyed a large number of ancient Hindu temples. In the ancient cities of Varanasi and Mathura, Ujjain and Dwarka, not one temple survives whole. And this went for a period of almost 1000 years. Almost every Muslim Sultan and his army commanders indulged in large-scale destructions of Hindu temples and idols. The evidence of the ferocity with which the Muslim invaders must have struck at the sculptures of gods and goddesses, is frightful. Everywhere shattered portions of stone images still lie scattered in the temple courtyards. Giving proof of the resentment that men belonging to an inferior civilization feel upon encountering a superior civilization of individuals with a more refined culture, Islamic invaders from Arabia and western Asia broke and burned everything beautiful they came across in Hindustan. So morally degenerate were the Sultans that they just built a number of mosques at the sites of torn down temples. This can be seen at the Jama Masjid and Ahmed Shah Masjid in Ahemedabad; the mosque in the Uperkot fort of Junagadh and in Vidisha; the Adhai Din ka jhopda right next to famous dargah in Ajmer – and the currently controversial Bhojshala mosque in Dhar.

Islamic invaders also suppressed cultural and religious practices; damaged the pristine vigor of Hindu religion, prevented the intensification of Hindu culture; debilitating it permanently, stopped the

development of Hindu arts, ended the creative impulse in all realms of thought and action, damaged the peoples cultural pride, disrupted the transmission of values and wisdom, cultural practices and tradition from one generation to the next; destroyed the proper historical evolution of Hindu kingdoms and society, affected severely the acquisition of knowledge, research and reflection and violated the moral basis of Hindu society.

"The descendants of those who built the magnificent temples of Bhojpur and Tanjavur, Konark and Kailas, invented mathematics and brain surgery, created mind body disciplines of astonishing power, and built mighty empires, would almost certainly have attained technological superiority over Europe."

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New York

I thank all these persons for their help.

Dr. Dilip Doctor and Dr. Dipika Doctor
Dr. Arjun Patel and Mrudula Patel
Dr. Ramesh Bhandari and Sukriya Bhandari.
Madhukanta Shah, and Ashwini Rajpal.

Chapter One:
India's influence in Southeast Asia!

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1. Philippines.
2. Kung Fu, Karate, Tae Kwon Doe.
3. Korea.
4. Japan.
5. Vietnam.
6. Malaysia.
7. Cambodia.
8. Thailand.
9. Indonesia.

India's debt to World Bank and to other countries of the world is considerable at present, but in past she has given more than she has taken now.

Professor A. L. Basham of the Australian National University in Canberra said in ***Wonder that was India***: Let us summarize **World's debt to India.** We must make it clear that she has given as much as or more than she has taken.

The whole of South-East Asia received most of its culture from India. Early in the 5th century B.C. colonists from Western India settled in Ceylon, which was finally converted to Buddhism in the reign of Aśoka. By this time a few Indian merchants had probably found their way to Malaya, Sumātra, and other parts of South-East Asia. Gradually they established permanent settlements, often, no doubt, marrying native women. They were followed by brāhmans and Buddhist monks, and Indian influence gradually leavened the indigenous culture, until by the 4th century A.D. Sanskrit was the official language of the region, and there arose great civilizations, capable of organizing large maritime empires, and of building such wonderful memorials as the Buddhist stūpa of Borobodūr in Java, or the Śaivite temples of Angkor in Cambodia. Other cultural influences, from China and the Islāmic world, were felt in South-East Asia, but the primary impetus to civilization came from India.

Indian historians, proud of their country's past, often refer to this region as "Greater India", and speak of Indian "colonies". In its usual modern sense the

term "colony" is hardly accurate, however. Vijay, the legendary Āryan conqueror of Ceylon, is said to have gained the island by the sword, but beyond this we have no real evidence of any permanent Indian conquest outside the bounds of India. The Indian "colonies"were peaceful ones, and the Indianized kings of the region were indigenous chieftains who had learnt what India had to teach them.

Northwards Indian cultural influence spread through Central Asia to China. Faint and weak contact between China and India was probably made in Mauryan times, if not before, but only when, some 2,000 years ago, the Han Empire began to drive its frontiers towards the Caspian did India and China really meet. Unlike South-East Asia, China did not assimilate Indian ideas in every aspect of her culture, but the whole of the Far East is in India's debt for Buddhism, which helped to mould the distinctive civilizations of China, Korea, Japan, and Tibet.

As well as her special gifts to Asia, India has conferred many practical blessings on the world at large; notably **rice, cotton, the sugar cane, many spices, the domestic fowl, the game of Chess, and, most important of all, the decimal system of numeral notation,** the invention of an unknown Indian mathematician.

India's influence in Southeast Asia:

Indian civilization, between about 500 B.C. and 1200 A.D., was perhaps the most glorious and influential the world has ever seen. Amazingly, the Indian achievement is still not properly recognized.

India's present problems may obscure it to some extent. But there is no longer any reason why the western world should remain blind to the special importance and value of India's contribution to world history and culture.

The subcontinent of India, which includes modern Pakistan and Bangladesh, is roughly the size of Europe. Westerners may find it hard to believe, but in fact her culture, literary and artistic, has produced more major works of art and intellect than the whole of the European tradition; and that despite the extraordinarily destructive tropical climate which has consumed untold quantities of sculpture, painting and manuscript. If the art and culture of Indianized Southeast Asia are reckoned in, the wealth of the integrated civilization appears so vast as to defeat the grasp of the imagination.

The creative potential of Indian culture made itself felt far beyond the borders even of the Indianized kingdoms of Southeast Asia. Cultural realizations of fertile Indian conceptions took place in China, Japan, Tibet, inner Asia and the Mediterranean world. Their genuine influence in the west is still growing.

Philip Rawson, of the British Museum wrote in ***Asian India***:

"There can no longer be any real doubt that both Islam and Christianity owe the foundations of both their mystical and their scientific achievements to Indian initiatives. It is also surprising that western historians, when they discuss Asia, leave almost completely out of account the Indian tradition of

maritime trade which was already over a millennium old before the Arabs came onto the stage of history. And which continued right through the Middle Ages".

India's merchant adventures were exploring the coasts of Asia, and developing international commerce over thousands of miles of sea in large cargo and passenger ships while the Romans were still developing the Mediterranean. Historians often refer to this region as ***Greater India***, and speak of Indian **colonies**. In its usual modern sense the term colony is hardly accurate, however historically Vijaya, the legendary Āryan conqueror of Ceylon, is said to have gained the island by the sword. Ram, king of Ayodhya, had defeated Ravan, king of Lanka according to Ramayan, which is a history, of Suryavanshi dynasty (solar). The Indian colonies were peaceful ones, and the Indianized kings of the region were indigenous chieftains who had learnt what India had to teach them.

Northwards Indian cultural influence spread through Central Asia to China. Contact between China and India was probably made in 3000 B.C. in Mahabharat war when defeated Chinas escaped to a land now known as China. Chinas were present during coronation of Yudhisthir. In recent history, only when some 2,000 years ago, the Han Empire began to drive its frontiers towards the Caspian did India and China met again. Unlike South-East Asia, China did assimilate Indian ideas in every aspect of her culture. Thus the whole of the Far East is in India's debt for Vedism and Buddhism, which helped to mould the

distinctive civilizations of China, Korea, Japan, and Tibet.

The extent of the spiritual influence of India on ancient West is often disputed. The heterodox Jewish sect of the Essenes, which probably influenced early Christianity, followed monastic practices in some respects similar to those of Buddhism. Parallels may be traced between a few passages in the New Testament and the Pali scriptures. Similarities between the teachings of western philosophers and mystics from Pythagoras to Plotinus and those of the Upanishads have frequently been noticed. Refer my book "Indian Origins of Ancient Civilizations" which shows that Greek civilization was the result of India's influence.

There was always some contact between the Hellenic world and India, mediated first by the Achaemenid Empire, then by that of the Seleucids, and finally, under the Romans, by the traders of the Indian ocean. Christianity began to spread at the time when this contact was closest. We know that Indian ascetics occasionally visited the West, and that there was a colony of Indian scholars and merchants at Alexandria. The possibility of Indian influence on Neo-platonism and early Christianity cannot be ruled out.

The creative potential of Indian culture made itself felt far beyond the borders even of the Indianized kingdoms of Southeast Asia. Cultural realizations of fertile Indian conceptions took place in China, Japan, Tibet, inner Asia and the Mediterranean world. Their genune influence in the west is still growing.

Many authorities may doubt that Indian

thought had any effect on that of the ancient West, but there can be no doubt of its direct and indirect influence on the thought of Europe and America in the last two centuries, though this has not received adequate recognition. This influence has not come by way of organized neo-Hindu missions. The last hundred years have seen the foundation of the Theosophical Society, of various Buddhist socities, and of societies in Europe and America looking for inspiration to the saintly 19th-century Bengali mystic, Paramhansa Rāmakrishna, and to his equally saintly desciple,Swāmi Vivekānanda. Lesser organizations and groups have been founded in the West by other Indian mystics and their disciples, some of them noble, earnest and spiritual, others of more dubious character. Here and there Westerners themselves, sometimes armed with a working knowledge of Sanskrit and first-hand Indian experience, have tried to convert the West to a streamlined Yoga or Vedānt. We would in no way disparage these teachers or their followers, many of whom are of great intellectual and spiritual caliber.

By the end of 19th century, however, the situation had changed. A new generation began to realize that Hindu culture had much of permanent value and that slavish imitation of the West could not solve India's problems. New organizations gave expression to this outlook. The Arya Samaj claimed to reform Hinduism by purging it of all later degenerate features and by a return to the Vedas, very liberally nterpreted, and had considerable success.

"The Aryasamaj founded by Dayananda Saraswati in 1875 is more nationalist and is still an

important force in Uttar Pradesh and the Punjab. The claim of its founder that all wisdom was to be found in Vedas, was accompanied by an attack on the worship of idols, an insistence on monotheism and social equality and much educational activity." --- Encyclopedia Britannica, 1972 Vol XI.

"Swami Dayanand Saraswati, the theosophists Madam Blavatsky and Mrs. Annie Besant, and Swami Vivekananda, all with different emphasis encouraged the belief that ancient India at her best reached a degree of spiritual and moral development far above that of contemporary West; and from the time of Dayananda onwards, it was even believed in some quarters that ancient India had possessed scientific and technical knowledge comparable to that of nineteenth centuy Europe." – studies in Indian history and Culture 1964.

More subtle, but more powerful, has been the influence of Mahātma Gāndhi, through the many friends of India in the West who were impressed by his burnig sincerity and energy, and by the ultimate success of his policy of non-violence in achieving India's independence. Greater than any of these influences, however, has been the influence of ancient Indian religious literature through philosophy.

The pioneers of the Asiatic Society of Bengal quickly gained a small but enthusiastic following in Europe, and Goethe and many other writers of the early 19th century read all they could of ancient Indian literature in translation. We know that Goethe borrowed a device of Indian dramaturgy for the prologue to "Faust", and who can say that the

triumphant final chorus of the second part of that work was not in part inspired by the monism of Indian thought as he understood it? From Goethe onwards most of the great German philosophers knew of Indian philosophy. Schopenhauer, whose influence on literature and psychology has been so considerable, indeed openly admitted his debt, and his outlook was virtually that of Buddhism. The monisms of Fichte and Hegel might never have taken the forms they did if it had not been for Anquetil-Duperron's translation of the Upani□hads and the work of other pioneer Indologists. In the English-speaking world the strongest Indian influence was felt in America, where Emerson, Thoreau and other New England writers avidly studied much Indian religious literature in translation, and exerted immense influence on their contemporaries and successors, notably Walt Whitman. Through Carlyle and others the German philosophers in their turn made their mark on England, as did the Americans through many late 19th-century writers such as Richard Jefferies and Edward Carpenter.

Though in the contemporary philosophical schools of Europe and America the monistic and idealist philosophies of the last century carry some weight, their influence has been considerable, and all of them owe something at least to ancient India. The sages who meditated in the jungles of the Ganga Valley thousands of years before Christ are still forces in the world.

It is today something of an anachronism to speak of Western civilization or Indian civilization. Until

very recently cultures were sharply divided, but now, when India is less than a day's journey from London, cultural divisions are beginning to disappear. If a *modus vivendi* is reached between democracy and fanatism, and civilization survives, the world of the future will have a single culture with, it is hoped, many local differences and variations. India's contribution to the world's cultural stock has already been very large, and it will continue and grow as her prestige and influence increases. For this reason if for no other we must take account of her ancient heritage in its successes and its failures, for it is no longer the heritage of India alone, but of all mankind.

It is also surprising that western historians, when they discuss Asia, leave almost completely out of account the Indian tradition of maritime trade which was already over millenniums old before the Arabs came onto the stage of history. And which continued right through the Middle Ages. India's merchant adventures were exploring the coasts of Asia, and developing international commerce over thousands of miles of sea in large cargo and passenger ships while the Romans were still developing the Mediterranean.

What we know of material culture in Indian Asia is tiny in relation to what once existed, But an enormous amount certainly waits to be unearthed, an archeology has in that sense only begun. There could be stupendous discoveries yet to be made, We know, for example, that somewhere adjacent to the Kabul region of modern Afghanistan there was in the 4th century AD a reclining sculpture of the dying Buddha 1,000 feet long, carved into a cliff face. It is no longer

visible. It is scarcely conceivable that it should have been destroyed. It is probably still lying in position, buried perhaps under fallen rock. A similar statue about 200 feet high was destroyed by phanatics.

To define the character of an entire civilization which extended at least two thousand years and many thousands of miles is a daunting task. But for Indian Asia there is a clear unifying root. This is a complex of ancient symbolic ideas which was fixed and condensed into two bodies of text that were treated as sacred, and so preserved unchanged over more than more than two and half millennia. The first is the Sanskrit Veda, a collection of ancient hymes with their associated Sanskrit literature and famous appendix called the Upanishads. The second is the literature of Buddhism. Certainly in their modern forms scattered throughout this vast area of the world the various expressions of Hindu and Buddhist ideas may seem outwardly different from one another, each being intimately woven into the fabric of its specific society. But through the visual arts their intrinsic unity as branches from the same root becomes clearly apparent.

This root spread out from India to strike deep into the soil of those disparate regions of Asia, with their widely various populations and totally dissimilar physical environments. Buddhism in particular naturalized itself in the freezing wastes of Mongolia among a population of horse-breeding nomads living in tents, in the cultivated heartland of China, and among tropical forest on the vast river plains of Southeast Asia. Hinduism established itself for varying lengths of time on the plains of Indochina and in the

volcanic southeastern islands; there on Bali it still flourishes.

The art which survives to testify to the greatness of the culture of Indian Asia represents a totally unique manifestation of the human creative spirit. It has taken many decades for it to win appropriate recognition in the west; that process will be charted in this book. Among the surviving monuments, fortunately, are many that have been reclaimed from the grip of very hostile environments – rocky desert or tropical jungle – and restored to surprisingly good condition; their sculpture and ornaments, if not their surface painting, may be relatively well preserved, and give a good idea of their original magnificence. The way some monuments are still used can give vital clues to the meaning and usage of comparable ancient works now abandoned. But when political and financial circumstances finally permit we can look forward to a considerable increase in our knowledge and appreciation of the splendid civilization that was Indian Asia.

Let us now see the influence of civilization of India on countries of South East and Far East..

1. India's Influence in Philippines:

"There is no tribe in Philippines no matter how primitive and remote, in whose culture today, elements of Indian origin can not be traced – Alfred I. Kroeber, leading American anthropologist, in "Peoples of the Philippines"

In Cleveland Clinic most of the nursing staff was mainly from Philippines. Among very co-operative nursing staff at Cleveland Clinic, most of the nurses were of Philippine origin. I felt them as similar as nurses from India. Indian cultural influence went well beyond Indonesia reaching Philippines also. Filipino historian Georgio F. Zaide describes Philippine in ***Philippine: Political and Cultural*** as "basically Malay (Indian) in might, Hinduistic (Indian) in culture and Buddhistic (again Indian) in religion." American archeologist Henry Otley Beyer, a dedicated scholar on Philippines civilization, carried out a series of remarkable excavations in the late 1920s at Novaliches in the Philippines. His work was systematic and concluded that all the artifacts found, including a large quantity of pottery, from implements and weapons such as knives and axes, glass beads and bangles and beads of semi-precious stones such as carnelian, agate and amethyst, were brought by the Philippines from India over a long period of trade, well before the beginnings of Christian era. He confirmed: "India has most profoundly affected the Philippine civilization." Mark the quotation of Alfred Kroeber at the beginning of this article. He used the words "primitive" and "remote." He further declared that

most of the folklore of the Philippines is of Hindu origin. There is profound influence of ancient Indian literature on the folklore of Philippines. The Maranaw epic "Darangan" the longest in early Philippine literature is basically from Mahabharat in plot and characterization. Tavera and Paterno, two Filipino scholars, and Sleeby, an American and others have concluded that about 25 percent of the Philippine vocabularies is still traceable to Indian influence.

Some years ago, when a new legislative building was put up in Manila, the capital of Philippine, they placed the statue of **Manu** of Vedic India in the Assembly Hall with this inscription on its base:

"The first, the greatest and the wisest law-giver of mankind."

India's flower Champak in Sanskrit language is the national flower of Philippines.

2. Indian roots of Kung Fu, Karate and Tae Kwon Do:

Master Chung Sik Choi, a very modest and well-mannered Korean gentleman, coach of martial art Tae Kwon Do for juniors participating at Olympics held at Greece in year 1991, was also a coach for senior Olympic team for the year 1992. His four students received gold and silver medals at the Olympics. His simplicity was impressive. Talking about ancient relationship between India, China and Korea, he said he has no doubt that this martial art came from India about 2300 years ago or earlier. In Japan, it became

Karate, which has some local characteristics, but basic principles of synchronization of body and soul remain same either in India, Korea, China or Japan. Tae Kwon Do has different cultural meanings and one of them is synchronization of feet, hands and mind.

Fighting without weapons was a specialty of certain class in ancient India. For warriors it was part and parcel of their all round training, but even for ordinary citizens it was essential. Some people never used weapons as they believed in non-violence. These people bound their heads with turbans called *Usnisa* to protect themselves from the blows of sword and axe. Fighting on foot without weapons was necessary in case a soldier was unseated from his chariot or horse and found himself without weapons. Although the Vedic high ethical code forbids from attacking another without weapons, such morals were not always observed.

In the Mahabharat war, Karn was attacked when he was without weapons. All Rajput kins followed this Vedic moral code including Prithviraj Chahuan. When Islamic invaders attacked India, they did not follow such moral code and massacred millions of weaponless peasants and other citizens. Anyway, faced with such unscrupulous opponents, people needed to defend themselves and therefore they developed a very effective form of hand-to-hand combat that combined techniques of wrestling, throws and hand strikes. Tactics and evasion were formulated that were later on passed to successive generations. This skill was called *Vajramushti,* a name meaning "thunderbolt with closed or clasped hands."

Prior to and during the life of Buddha, various

principles were embodied within the warrior class known as Kshatreya, which in Japanese became Setsuri. This title stemming from Sanskrit root Kshetra meaning "power", described an elite force of usually royal or noble warriors, who were trained from infancy in a wide variety of military arts, both armed and unarmed. This training has been codified in India for over 5000 years. Each movement of the training is repeated several times and demands great suppleness. The blows are hard and the parade must be fast and precise to avoid being hit on the fingers. One training session involves big canes, favorite weapons of the Buddhist traveler monks, which they used during their long journey towards China to scare away attackers. In India, *'Kshatreya Vajramushti'* changed gradually to "*Boddhisatva Vajramushti,"* which in China became Kung Fu, Karate in Japan and Tae Kwon Do in Korea.

3. Strong evidence of Indian ancestry in Korea!

"A genetic discovery in South Korea has claimed that the Koreans could have Indian ancestry 2000 years ago." – Joong Ang daily of South Korea.

English orientalist Philip Rawson wrote in *The Art of South East Asia:*

"The culture of India has been one of the world's most powerful forces. Countries of the Far East, including China, Korea, Japan, Tibet and Mongolia owe much of what is best in their own cultures to the inspiration of ideas imported from

India." Korea was already profoundly Vedic with Sanskrit language before the arrival of Buddhism. It was a center of Sanskrit studies and abounded in Hindu temples, of which the famous Sita temple is an extant example. Five hundred years ago, Korea wanted to change its script to Devanagari, a project which was abandoned then, only to be taken up in 1906. China changed Korea's language and ideographs, but India's Sanskrit and phonetic letters from which syllabifies or alphabets were constructed remained for vernacular writins and printing.

According to BBC news, Korean historians believe that Queen Huh was a princess of an ancient kingdom in Ayodhya of India. She went to Korea some 2000 years ago and started the Karak Dynasty by marrying a local king, Suro. Today, the historians say, Queen Huh's descendants number more than six million, including the South Korean President Kim Dae Jung.

This 16-year old princess from Ayuta (Ayodhya) went to Korea in 48 C.E. A 13th century Korean text records princess Heo-hwang-ok explaining that her parents dreamt "a god came who said, "I have sent down Suro to be king of Kaya. Suro is a holy man and is not yet married. So send your daughter to be his Queen." South Korea's 72nd generation descendents of King Suro believe they are related to India's present day Raja Bimalendra Mohan Prasad Mishra, whose ancestors ruled Ayodhya. They sent delegations to India to build a monument in Ayodhya to commemorate the relationship. Though Mishra is unable to trace his ancestry back more than

300 years, he is happy to accept the Korean belief and their initiative to invest $2 billions to make Ayodhya a sister city of Kimhae, Dr. Seo Jeongsun of Seoul National University and Kim Jong-il of Hallym University conducted the research and decoded the entire genetic code of ancient Korean remains. They have recently presented their findings at a meeting of the Korea Genome Organization in Chuncheon, Gangwong province. The findings gain interests. Modern historians came across the date 372 A.D., when Korea formally accepted Buddhism. They presumed that Korea's links with India must have started in 372 A.D. , but Vedic culture had already penetrated earlier.

In Korea, impressive gateways are erected at some distance in front of the temples, like in India at Somanath, and on the frieze of the portal, the name of the temples are inscribed, occasionally in Sanskrit letters.

The name of a first century Korean King was Kim Suro. Suro may be a Sanskrit word Surya, the sun. According to Vedic tradition one illustrious line oof Vedic rulers claimed descent from the Sun. They were thence known as Suryavanshi i.e. of Solar Dynasty. King Suro was one such. The Korean monarch had a marital connection with the most illustrious solar dynasty, which had its capital at Ayodhya in India. The capital of Korea at that time was Kaya. Many a times it is written as Gaya. So Korea may be Gorea or Gauriya, like Siberia, Russia, Machuria, Syria and Assyria, all originally Sanskrit names. Korea may have been derived from Kuru also. Kim clan was a very powerful solar Dynasty, which

had sway over the Korean region. Kim looks like curruption of the Sanskrit term Sinh. Many Kshatriyas princes married abroad like Dasharath with Kaikeyi, Dhrutarashtra with a princess of Gandhar, Chandragupta with Greek daughter of Selucus, and recently Maharaja Karansinh of Kashmir with princess of Nepal.

4. India's gift to Japan: Japan's religion is based on Brahmanism and Buddhism!

There is no country in the world (other than Japan) where so many students are learning a rudimentary knowledge of Sanskrit language! –

Author Hisashi Nakumura in ***Japan and Indian Asia*** page 3. The normal impression is that the Indian culture traveled to Japan through China and Korea. But even earlier, according to Japanese Shinto scholar Taka Kasu, Japan's oldest religion was Brahman-okoyo or Brahmanism. It is now known as ***Shintoism,*** which is a Japanese pronunciation of Sindhuism or Hinduism. Japanese culture is a compound of mainly Shintoism and Buddhism with some influence of Confucianism. Shintoism is the root embedded in the soil of national traditions and disposition. Shintoism, the indigenous religion of Japan reflects the life and temperament of the people and is closely connected with national traditions and social institutions.

According to a scholar of Ethnology, H. Nakumura, there is evidence of the presence of an Indian community in the Shima district in Mie Prefecture. Before the arrival of Buddhism, religious

beliefs centered on the worship of natural forces and ancestors. Hinduism entered Japan centuries before the message of Buddha. Japanese kings claim solar descent, which may be a Hindu idea, imported there. Buddhism entered Japan at a later date and as a phase of Hinduism. According to Hamsworth History of the World, page 312, the aboriginal inhabitants of Japan were Aryans known as Ainus. They are now few in number and cofined to Yezo, the Kurile Islands, and part of Sakhalin. All Vedic gods and goddesses are worshiped in Japan even today in some form or another. Fifteen miles from the heart of Tokyo is a Hindu temple of Indra with two figures of Hanuman guarding the image. In Tokyo, even today large crowds visit the temple of goddess Saraswati. Fudo, a Japanese god, stands for the terrible form of Shiv. He possesses a third eye, a trident and a lasso of snakes. All the Vedic deities, Brahma, Shiva, and Vishnu, Lakshmi, Durga and Ganesh and Varah and Matsya avatars (incarnations) of Vishnu are all enshrined in the temple of Kyoto, Nara, Miyajima and a host of other places. For more than a century, Nara was a center of Sanskrit learning around 700 A.D. The temple and festivals here remind one of Banaras. In some Japanese temples, very ancient manuscripts in Sanskrit are preserved in tact. It is significant that many of these manuscripts found in Japan are much older than those preserved in India.

In 538 AD, Korea made the first official presentation of a golden statue of the Buddha, some beautiful banners and sacred texts to the Japanese court as a token of her friendship and homage. With the introduction of Buddhism, Japan experienced the

throb of a new life and her life-energies received a new impulse and orientation. This is again India's gift to Japan. Japan's industrial and political achievements in this century have inspired the Indians, and Japan is playing an important role in the repatriation of Buddhism in India, as well as in Indian economic advancement. Courses of Japanese languages and literature have been established at Indian universities. The exchange of leading statesmen and scholars in recent years has also helped to reactivate cultural contact.

5. Ancient Indianization of Vietnam!

The peoples of Vietnam and Cambodia became Indianized through lively commercial relations with India and through penetration of Indian priests and literati before the rise of both kingdoms. The Indianization of these two states was not due to Indian military conquests. – Encyclopedia of Britannica Vol. 19.

Vietnam is divided in two nations, North Vietnam and South Vietnam. In the north is the delta of Tom Kin known as North Vietnam and it had direct sea contact with India and played a significant role in transmitting Buddhism to China. South of Tom Kin, divided by an almost impenetrable chain of mountains, is Annam known as South Vietnam, where one of the earliest and most brilliant Southeast Asian civilizations developed known as Cham and the country was known as Champa.

Cham civilization was thoroughly Indianized. Sanskrit was used as a sacred language, and Indian

influence dominated art and agriculture, as is evidenced by the collection of Cham art in the museum of Da Nang and by the ruins of a Cam city in the province of Quang Nam. The name Champa is clearly Indian, whether it was named after the capital of the Anga country in the lower Ganga Valley, or after the Chola capital of the same name.

According to Mahabharat, Karna was made king of Angdesh, a country on bank of river Ganga near Bhagalpur in Bihar. Capital of this Angdesh was Champa, too. Scholars link this Angdesh with Angadwip of Vayu Puran and linked to Yawadwip in Walmiki Ramayan. Champa was divided in three regions.

North was Amaravati now Kwang which included Indrapur and Sinhpur. Next was Vijay, now Bin Dinh and included Shrivijay and Shri Vinay and south was Pandurang known as Fan Rang and Bin Thuan and included Virpur and Sinhpur. Sinhpur is now Mi Son. King Vikrantvarman built temple for Walmiki during 650-679 AD. King Indravarman (third) ruled from 854 to 893 AD., who declared Buddhism as state religion. The advent of Indians in Southeast Asia has hardly a parallel in history. There appears to have always been some form of contact. Indian contacts with Southeast Asia began many centuries before the Christian era and continued vigorously until 1500 AD. Whilst Hinduism stagnated and Buddhism almost disappeared in India with the arrival of Islam, they both flourished in Southeast Asia. Burma, Thailand, Ceylon, Laos, Cambodia and Vietnam and are even today predominantly Buddhist nations. Sri Mara founded a Hindu dynasty in the

second century A.D. and successor to Sri Mara was the famous king called Bhadravarma. He ruled over the Northern and central portions of the kingdom comprising the provinces of Amaravati and Vijay and possibly also the Southern province of Pandurang. His greatest contribution to Hindu culture was the building of the temple of Bhadreshvaramswamin (shiva) at Mi Son, which became the national shrine of the Chama. It is said that Bhadravarman abdicted his throne to spend his last days on the banks of the Ganga. Shiva and Vishnu were worshipped by various names. Godess Lakshmi was known as Padma or Sri.

As regards to literature, Sanskrit was the language of the 5 Each statue had own temple.learned. It was also the official language of the country. Many kings of Champa were Sanskrit scholars. Brahmi was the language used in inscriptions. The books in use were the Vedas, Shastras, the epics, Buddhist philosophy, Shaivaism, Vaishnavism, Panini's grammar along with its commentary. Dharmashastras of Manu and Narad, the purans and classical Sanskrit literature including prose and Kavya literature.

The Champa region was very famous for the predominant Shiva worship. Ganesh arrived there with Shiva very early as mentioned on the temple inscriptions. Following Ganesh temples are famous: 1. Ganesh in Triton (Rochefort Museum, France) 2. Two armed sitting Ganesh from Phu Ninh, 3. Sandstone sitting Ganesh from Tuol Pheak Kin at National Museum Phnom-Penh. 4. Sitting bronze Ganesh in the Bayon style at Phnom-Penh National Museum. 5. Ganesh with three deep set eyes at Saigon Museum. 6. A beautiful two-armed sitting Ganesh at Da Nang

Museum. 7. A standing four-armed Ganesh in Miso'n E. 5. Each statue had own temple.

6. In Malaysia, even today chief of army is called "Lakshaman!"

Sailendra Empire or the empire of Shri Vijaya became the dominant Hindu power both on sea and land in the whole of Malaysia by the eighth century. Historian Winstedt writes in ***The Malayas: A Cultural History page 27*** that the Kedah Annals record how on conversion to Islam, the Malaysians destroyed all the idols they were accustomed to worship, together with idols, handed down from their ancestors. Even then, concepts of state and kingship in Malaysia, royal titles such as Seri Paduka, ceremonies connected with coronation, and royal prerogatives are clearly of Hindu inspiration. Malaysia's literature and folklore are deeply influenced by the Hindu epics the Ramayan and Mahabharat. Her language has many Sanskrit words and until the introduction of Arabic and later Roman scripts were used in Malaya and the Archipelago.

The language and the culture of Malaysia is still Sanskrit and Hindu. Kualalumpur, the name of the capital city of Malaysia is a Sanskrit name. The original Sanskrit name was *Cholalanampuram*, where Sanskrit *pur* is city and the meaning is "the city of Cholas." Similarly the Seramban comes from Sanskrit *Sri Ram Van* meaning the bower of Lord Rama. The name *Sungeri Pattani* comes from the Sanskrit *Shring Pattan*, meaning "Mountain City." This shows the overpowering influence of Sanskrit language and Vedic culture. Malaya is also a Sanskrit word and

many Malaysian towns bear Sanskrit names. Even though today Malaysia is an Islamic country the rulers in the native states continue to bear Sanskrit titles. Royal princesses are called Putri, Mahadevi, Vidydhari, while the men have names such as Rama and Lakshaman. Even their palaces are known as Aasthana, a Sanskrit word. Two generations ago, the ruler of Johore Bahru was known as Maharaja a Sanskrit word and Hindu title.

All excavations in Malaya yield Vedic images and temples. A Shiv temple was discovered at Petaling Jaya, the name of which means "the great crystal emblem of Lord Shiva", indicating that there could have been a great crystal Siva-ling there. Also, the ancient Sanskrit text known as the *"Pundarika Stotra"* was found a few miles from the city of Ipoh at the hot water stream. Even though the Sanskrit inscriptions that have been discovered so far, do not date back futher than the fourth century, the literary references fix the date of the Indianized states in Malaysia much earlier.

Indian culture was centuries old in Kedah in the seventh century. The members of Malaysian universities have done recently archeological work. Of the 30 sites excavated by Quaritch Eales, eight spear to be Buddhist, as many as 12 are Shaiva and Vedic and three are the remains of secular buildings.

Singapore, which is a great city now and a country, was originally a settlement of the Sumatran colonies. Singapore is a Sanskrit name Sinhpur. *Sinh* is for lion and *pur* is for city. Because some people could not pronounce Sanskrit words, over the time *Sinh* got changed to *Singh* to *Singa*, while *pur* became *pore.* So

now *Sinhpur* became Singapore. Singaporeans call their city as lion-city meaning Sanskrit *Sinhpur*. From pre-historical time, Singapore was a major port on the routes between India and the Pacific Islands and onto Mexico. British explorer Raffles recorded in his memoirs near the close of 15th century of seeing a fortress built by Parmeshvar near what is now Stamford Road.

In Malaysia, even today, the commander-in-chief of the army is called Lakshaman – a remnant of the role played by Lord Rama's brother in a Rama-Ravan battle.

In the Rig Veda, a passage (I.25.7) represents Varun having a full knowledge of the sea routes, with another passage (L.56.2) speaks of merchants going everywhere and frequenting every part of the sea for gain. The Ramayan refers yo Yava Dwipa (Java), Suvarna Dwip (Sumatra) and Shankh Dwip (continent of Africa), and to Lohit Sagar (Red Sea). The great play *Shakuntala* of Kalidas, *Ratnavali* of king Harsha, *Sisupal Vadh* of Magha, all of these relate stories of sea voyages of merchants and travelers and the fabulous literature of India is replete with storie of sea voyages by ancient Indians. The representation of ship on a seal found at Harappa indicates maritime activity, and there is enough evidence to show that the peoples of the Sindhu and Saraswati Valley carried on trade not only with other parts of India but also with Egypt, Sumer and the centers of culture in Western Asia.

There was a time in the past, when Indians were the masters of the sea-borne trade of Europe, Asia and Africa. They built ships, navigated the testimony of

Sanskrit literature to establish the fact that the ancient Hindus were a commercial peope."sea, and held in their hands all the threads of international commerce, whether carried on over land or sea. In Sanskrit literature we constantly read of merchants, traders and men engrossed in commercial pursuits. Manu Smriti, the oldest law book, lays down laws to govern commercial disputes having references to sea borne traffic as well as an inland and over land commerce. India, according to Chamber's Encyclopedia, has been celebrated during many ages for its valuable natural productions, its beautiful manufactures and costly merchandise. "India was" says Encyclopedia Britannica, "once the seat of commerce." Sir William Jones was of the opinion that the Hindus must have been navigators in the age of Manu. Lord Elphinstone has written that the Hindus navigated the ocean as early as the age of Manu's code, because we read in it of men well acquainted with sea voyages. Ms. Manning, author of ancient and Mediaeval India writes: "The direct evidence afforded by the presence of Indian products in other countries coincides with the direct testimony of Sanskrit literature to establish the fact that the ancient Hindus were a commercial people."

Indian traders would set sail from the ports of Bhrigukutchha and Mahabalipuram, carrying with them cinnamon, pepper, and their civilization from and to the shores of Java, Cambodia and Bali. Like the Western world, the Indian world stretches far beyond its border, though India has never used any violence to spread her influence. The Indian colonies, known as Greaer India in the Southeast and Far East must ever

remain as the high watermark of maritime and colonial enterprise of the ancient Indians. It has been proved beyond doubt that the Indians of the past were not, stay-at-home people, but went out of their country for exploration, trade and conquest.

Sir Aurel Stein, a Hungarian scholar, whose valuable researches have added greatly to our knowledge of Greater India, remarks:

"The vast extent of Indian cultural influences, from Central Asia in the North to tropical Indonesia in the South, and from the borderlands of Persia to China and Japan, has shown that ancient India was a radiating center of a civilization, which by its religious thought, its art and literature, was destined to leave its deep mark on the races wholly diverse and scattered over the greater part of Asia."

Let Philip rawson say about Indian Asia: "The art, which survives to testify to the greatness of the culture of Indian Asia, represents a totally unique manifestation of the human creative spirit. If the art and culure of Indianized Southeast Asia are reckoned in, the wealth of the integrated civilization appears so vast as to defeat the grasp of the imagination." Only since World War II has the term Southeast Asia been used to describe this area. Before the term Southeast Asia became common usage, the region was described as Further India or Greater India and it was common to describe the Indonesian region or Malay Archipelago as the East Indies.

7. The largest Hindu temple is in Cambodia!

M. Rene Grosset, French art historian says:

"In the high plateau of eastern Iran, in the oases of Serindia, in the arid wastes of Tibet, Mongolia, and Manchuria, in the ancient civilized lands of China and Japan, in the lands of the primitive Mons (Burma), and Khmers and other tribes of Indo-China (Cambodia, Laos and Vietnam), in the countries of the Malaya-Polynesians, in Indonesia and Malaya, India left the indelible impress of her high culture, not only upon religion, but also upon art, and literature, in a word, all the higher things of spirit. Names like Indo-China, Further India, Insulindia, Indonesia, Greater India, East Indies, which are applied to various parts of South-East and Far-East, are as significant as Ser-India. This region is geographically an extension of India and Ptolemy rightly calls it Trans-Gangetic India."

Mackay Hill Bukler writes in ***A History of World Socities*** **that:**

India is a country of temples. But writes M. Jorden in *Eastern Wisdom:*

"The philosophies and rituals of the East, there is a certain irony in that one of the largest and most dramatic monuments to Hinduism rests not in India but thousands of miles away from the subcontinent amid the ruins of a metropolis hidden in the jungles of Cambodia. Cambodia boasts the largest temple complex in the world, named Angkor, from the Sanskrit meaning the capital city."

It was built in the ninth century C.E. in honor of the Hindu god Lord Vishnu. Thus the largest Vedic

(also popularly called Hindu) temple in the world is iin Cambodia, and not in so-called Hindu nation Nepal or in India, where Hindus are in majority. Cambodia achieved what the Indian subcontinent never could: the confluence of Vedic faiths and regional cultures. To know and understand India, one has to travel far in time and space. Cambodia's Principal River is today called Me Kong, which scholars say is derived from India's Ma Ganga (Mother Ganga). Around the first century A.D. Indians arrived in Funan (South Cambodia-Vietnam), and a Brahmin scholar named Kaundinya married the daughter of the local Naga King and introduced Vedic religion and culture and Sanskrit to the region. The power center shifted to Angkor from the ninth to fifteenth centuries AD. The founder of the first Angkor at Rolos (ancient Hariharalaya) was Devraja Jayvarman II. His descendant Indravarman I built the first temple-mountain or Mount-Meru at Bakong and a temple tank or Indratakaka, both of which were to define Angkorean temples of the future. Three other Angkorean sites were Phnom Bakheng on a natural hill, Yashovardhanpura where the king Suryavarman II built the great Angkor Wat, and the mysterious Angkor Thom. Angkor Wat is truly a wonder. It occupies about 500 acres bounded on all four sides by a wall and an enclosed tank. The causeways, flanked by enormous nagas and lions, represent rainbows. The temple is 65 meters high, made up of three platforms, progressively smaller, with covered galleries defining the borders, and is a replica of the cosmos. The first level contains 1200 square meters of carved sandstone galleries illustrating scenes from the Ramayan and the

Mahabharat.

Historian Pandit Jawaharlal Nehru wrote: "Let it be said immediately that Angkor, as it stands, ranks as chief wonder of the world today."

8. King of Thailand bears the title of "Rama"!

Indian civilization spread to Syamdesh or Siam now known as Thailand. By about second century AD. Colonies set up by Indians are recorded. Most important of them was Dvaramati which ruled from Cambodia to the Bay of Bengal up to the 10th century AD. , when it was overthrown by the Kaundinya Kingdom, another Hindu Kingdom. Numerous excavations have yielded extensive evidence of Indianization and some remarkable piece of art. Because Siam increasingly assimilated Indian art and culture into a local pattern, relics of pure Indian descent are more ancient than those reflecting local influences. One of the most remarkable sites in the center of Siam, is Srideb, where statues of Indian deities bearing Sanskrit inscriptions of the 5th and 6th century have been discovered. The art of Srideb is of excellent quality and provides a link between Indian art and the art of Southeast Asia.

Although Thailand is today predominantly Buddhist, (Buddhism is Rreligion from India), there are traces of Hindu influence, visible mostly in the court ceremonies. Until recently, the court Brahmins cast horoscopes, consulted omens, and performed worship of both Hindu and Buddhist deities. The Brahmins developed ceremonies of coronation,

tonsure, cremation, and lesser rites connected with agriculture. The Siamese call their coronation by its ancient Sanskrit designation, the *Rajabhishek.*

The entire complex of coronation ceremonies, such as homa, purificatory rites, ablutions, anointment, are closely modeled on Hindu rituals, and are presided over by the Brahma Maha Raja Guru. The tonsure ceremony in Siam is a rite of initiation of youths, corresponding to the Hindu *Chudakarma Mangala,* which is very important Hindu *Samsakar.* Cremation, an old Vedic rite is the only means of disposal of the remains of deceased royalty in Siam. Even today, the kings of Thailand bear the royal title of Rama, a Hindu avatar, and the story Ramayan is depicted on the palace and temple walls of Bangkok, the capital. Hindu festivals such as Dashera, commemorating the victory of Rama over the king Ravan, are still observed in Thailand. The Thais, like the Hindus, still believe in Vishnu or Narayan and Mahadev or Shiv, and dislike the Asurs as the eemies of the Devas. Famous Indian works, such as the Ramayan and the Mahabharat, and the Shakuntala have formed the basis of some of the outstanding Siamese literature. The Ramayan, known in Siam as the Ramakien, Rama-Akhyan, where Akhyan is a Sanskrit word meaning "rendition of a story." It is regarded as Siamese classic. Knowledge of this work is as essential fthe story of Savitri and Satyavan. Indian Dharmashastras provided the frame work for the Siamese justice. or a cultured Siamese as Homer used to be for an European. The epic and Puranic literature of India constituted the principal source of inspiration not only

for Siam but also for the whole Southest Asia. It provided the theme for classical theater, Shadow Theater and marionette shows. Indian influence is clearly seen on Siamese dance, drama and music. Many of the themes of Siam's various dance-dramas are drawn from the Indian stories; for example,

Before they made Bangkok their capital, their traditional capital was Ayuthya, Ramayan's Ayodhya. Ramayan's Ayodhya, before the Burmese invaded it. The national and royal symbol for Thailand is Garuda, the celestial eagle, carrier of Vishnu. Thailand's king Bhumipal Aduladej gets his name from Sanskrit, which means "the strength of the land of immeasurable splendour." All temples bear Sanskrit names, such as Wat Arun, and Wat Deva Sri Indra. Names of the cities are Ayodhya, Cholapuri and Rajpuri.

9. Building of Defence Ministry in Indonesia is called "Yuddha Gruha!"

Indonesia is made up of thousands of islands, mainly of three islands of Java, Bali and Sumatra, and all the three are Sanskrit names. It is not generally understood that the name "Indo-nesia" does not refer to Asia. The term "Nesia" signifies, a group of islands, and "Indo" of course means India. Thus, Indonesia means Indian Islands. The name Java came from Sanskrit Yavadwip. Yava dwip is mentioned in India's earliest epic Ramayan. The Ramayan reveals knowledge of the eastern regions beyond the seas; for instance, Sugriv dispatches his men to Yavadwip, the island of Java or Sumatra in search of Sita. Puranic

cosmology and geographical divisions into Varshas and dwipas point to Indian knowledge of this area.

All of the most ancient of Indonesian shrines are dedicated to Indian Vedic deities and depicts scenes from Indian epics. Indonesian dance and music are of Indian origin. All its ancient cities, villages and towns bear Sanskrit names as are most personal names. Their language is a dilect of Sanskrit known as Bahasha, a Sanskrit term Bhasha. The Indonesian flag, being of two colors, bears the Sanskrit name Dwi-Varna. The five cardinal points of the Indonesian Constitution are also designed by the Sanskrit word Panchshila. Its airline is called Garuda, the Sanskrit name for the eagle, carrier of Lord Vishnu. The old Javanese alphabet derives from the Pallav script of South India. Indonesians still follow the Vedic year and call it Sakha-Samvat. On the outskirts of the city Jogiakarta, or Yogyakarta, is a famous acient Vedic temple complex known as Borobudur, displaying the majestic Vedic architecture and now containing hundreds of statues of the Buddha. Not far from Borobudur is the complex of Prambanam, the like of which is known neither to India nor to any other neighboring or distant land. Here are the life-cycles of Lord Krishna known as the Krishnayan parallel to the Ramayan.Vedic culture was prevalent throughout the pacific region from India to Malaysia, Indonesia, Borneo, Korea, Indochina, the Philippines, Japan, Australia, New Zealand and farthest Mexico.

Old Javanese songs describe episodes from the Ramayan and the Mahabharat. Shadow plays are often woven around these epic tales, especially of Rama and Krshna. Even today the ruins of Shiv and

Vishnu temples can be seen all over Pantarin of Eastern Java. Therefore, although Java and Sumatra are today prominently Muslim,

we can safely say that before the 14th century when Arab marauders engaged in their terror raids upon this region, Java and Sumatra were a part of and practiced the Vedic culture.

French scholar Sylvain Levy wrote: "From Persia to Chinese Sea, from the icy regions of Siberia to the islands of Java and Borneo, from Ocenia to Socotra, India has propagated her beliefs, her tales and her civilization. She has a right to reclaim in universal history the rank that ignorance has refused her for a long time to hold her place amongst the great nations, summarizing and symbolizing the spirit of humanity."

Wilhelm Von Humboldt, German Indologist, Prussian Minister of Education, a brilliant linguist and the founder of the science of general linguistics wrote:

"Kawi language is of Sanskrit loan words which prove the literary and political superiority of the Hindus. The historical background has the emigration of Brahmins, who brought the Ramayan and Mahabharat, and other works of the Sanskrit literature. He showed that no Prakrit words are found in Old Javanese and he deduced from this that the Indian immigrants must have come to Java at a time when the more recent Indian language had not yet separated from Sanskrit."

An image of Deva Ganesh is printed on high denominational currency notes. Ganesh statues are seen everywhere. The name of the building of Defence Ministry is Yuddha Gruha, and Ministry of Sports is named Krida Bhakti.

As well as her special gifts to Asia, India has conferred many practical blessings on the world at large; notably **rice, cotton, the sugar cane, many spices, the domestic fowl, the game of Chess, and, most important of all, the decimal system of numeral notation,** the invention of an unknown Indian mathematician.

--- Dr. A.L. Basham of Australian National University, Canberra in : *Wonder that Was India!*

Practical Blessings:

1. Rice:

Rice is a edible starchy cereal grain and the plant by which it is produced. The cultivated rice plant, *Oryza sativa* is an annual grass growing four feet tall. The leaves are long and flattened, and its panicle, or inforescence, is made up of spikelets bearing flowers that produce the fruit, or grain.

The origin of rice has been traced to India in about or before 3000 BC where natives discovered the plant growing in the wild and began to experiment with it. Rice is first mentioned in the Yajur Veda, supposed to be edited before the year 4000 BC. There is archeological evidence proving that rice was being cultivated around 10,000 BC in Northwest India.

Historians believe that the *indica* variety of rice was first domesticated in the area covering Eastern Himalayas stretching through Orissa, Bengal, Burma, Thailand, Laos, Vietnam and Southern China. Wild rice was probably first cultivated in the Ganga Valley by the Neolithic contemporaries of the Harappa people. It then spread to all the fertile alluvial plains watered by rivers. Cultivation and cooking methods are thought to have spread to the West rapidly and by medieval times, southern Europe saw the introduction of rice as a hearty grain.

Rice is often directly associated with prosperity and fertility; hence there is the custom of throwing rice at newlyweds. In India, rice is always the first food offered to the babies.

Today, the majority of all rice produced comes from India, China, Japan, Indonesia, Thailand, Burma, and Bangladesh, and account for 92 percent of the world's rice production. The crop may well have been introduced to Greece and neighboring areas of the Mediterranean by the returning members of Alexander's expedition to India ca. 344-324 B.C. From a center in Greece and Sicily, rice spread gradually throughout the southern portions of Europe and to North Africa. Interestingly enough, medical geographers in the 16th century played an important role in limiting the adoption of rice as a major crop in the Mediterranean area.

During the 16th and early 17th centuries, malaria was a major disease in southern Europe, and it was believed to be spread by the bad air (hence the name mal-air-ya) of swampy areas. Major drainage projects were undertaken in southern Italy and wetland rice

cultivation was discouraged. There is no early reference to rice in Jewish scriptures of the Old Testament, and no reference exists in early Egyptian records.

For domestic fowl, Game of Chess, Decimal system of numeral notation, see chapter two.

2. Sugar.

John F. Robyt locates the most probable origin of sugar cultivation as North East India. The evidence of sugarcane cultivation dates as early as 10,000 BC to 6000 BC. Further archeological evidence associates sugar with the Indus Valley. Crystallized sugar was reported 5000 years ago in India. Sugarcane is one of the major crops of India. *Ikshu*, the term for sugarcane is found in the Atharva Veda, Vajasaneyi Samhita, Maitriyani Samhita, and Taittariya Samhita. It is mentioned in Gruhya Sutra of Ashwalayan. It has been suggested that the celebrated family of Ikshavakus got its name from its having an extensive plantation. Even today, sugarcane is being used in certain Vedic ceremonies all around the country of India. The English word sugar originated from the Arabic and Persian word *Shakkar*. The Arabian and Persian word *Shakkar* itself was derived from Sanskrit *Sharkara*. It came to English by way of French, Spanish and Italian, which derived the word *sugar* from the Arabic and Persian *shakkar*. The Portuguese word *acucar*, the Spanish word *azucar*, the Italian word *zucchero*, the Old

French word *zuchre* and the contemporary French word *sucre*, all are from the original Sanskrit word *Sharkara*.

Indians were the first people to discover how to crystallize sugar. John F. Robyt locates the most probable origin of sugar cultivation as North East India. The evidence of sugarcane cultivation dates as early as 10,000 BC to 6000 BC. Further archeological evidence associates sugar with the Indus Valley. Crystallized sugar was reported 5000 years ago in India. In 510 BC, the emperor Darius of Persia invaded India where he found the reed which gives honey without bees. Around the eighth century AD Arabs introduced sugar to the Mediterranean, Mesopotamia, Egypt, North Africa and Spain. By the 10th century there was no village in Mesopotamia that did not grow sugarcane. It was among the early crops brought to the Americas by the Portuguese. At this stage, sugar was still a luxury and vast profits were made to the extent that sugar was called "white gold." However, sugar remained relatively unimportant until the Indians discovered methods of turning sugarcane juice into granulated crystals that were easier to store and to transport.

Indian sailors, consumers of clarified butter and sugar, carried sugar by various trade routes. Traveling Buddhist monks brought sugar crystallization methods to China. During the reign of Harsha in North India, Indian envoys in Tang, China taught sugarcane cultivation methods after Emperor Taizong of Tang (626-649) made his interest in sugar known, and China soon established its first sugarcane cultivation in the 7th century.

Chinese documents confirm at least two missions to India, initiated in 647 A.D. for obtaining technology for sugar refining. In South Asia, the Middle East and China, sugar became a staple of cooking and desserts. The sugar beet was first identified as a source of sugar in 1747. The European Union, Brazil and India are the top three producers and together account for some 40 percent of the annual production of sugar. However, most sugar is consumed within the country of production and approximately 25 percent is traded internationally.

Chapter Two:

INDIA by historian Stanley Wolpert of University of California.

1. Zero.
2. Numerals.
3. Mathematics.
4. Arithmatic, Geometry, Algebra, Trigonometry.
5. Cotton.
6. Weaving.
7. Dyeing.
8. Mango.
9. Chess.
10. Domesticationn of Chicken.
11. Domestication of Elephant.

India is the world's most ancient civilization, yet one of its youngest nations. Much of the paradox found everywhere in India is a product of her inextricable antiquity and youth. Stability and dynamism, wisdom and folly, abstention and greed, patience and passion compete without end within the universe that is India. Everything is there, usually in magnified form. No extreme of lavish wealth or wretched poverty, no joy or misery, no beauty or horror is too wonderful, or too dreadful, for India.

In many ways India is more truly a state of mind than a national body, even as Indic Civilization has endured for more than 4,000 years as an empire of ideas rather than territorial boundaries.

Her very weakness at times has been her greatest strength, since for sheer endurance India is unique. Bowing low before the onslaught of armies and elements, India has survived every invasion, every natural disaster, every mortal disease and epidemic, the double helix of her genetic code transmitting its unmistakable imprint down four millennia to no less than three-quarters of a billion modern bearers. Indians have demonstrated greater cultural stamina than any other people on earth, with possible exception of the Chinese. Old as she is, India continues to grow and flourish, transmuting her ancient forms into innovative modernity, adapting her past to suit the present, overcoming Death itself by creating such ingenious concepts as reincarnation, yet welcoming individual extinction as the ultimate goal of Salvation through 'Release' – Moksha.

Indic civilization has enriched every art and science known to us. Thanks to India, we reckon **from zero to ten with misnamed "Arabic" numerals and use a decimal system without which our modern computer age would hardly be possible. Ancient Indians were the first humans to spin and weave cotton into cloth that continues to provide our most comfortable summer attire. Indians taught us to domesticate and eat chicken, to play chess, to gamble with dice, to love mangoes and elephants, to stand on our heads for good health,** to believe in the coexistence of contradictions, and to appreciate the beauty and universal possibility of nonviolence. India is the birthplace of Buddhism as well as Hinduism, motherland of Sikhs and Jains, the abode of more rishis, sadhus, mahatmas, and maharshis and their many cults than any other place on earth. India is a learning laboratory for linguists, a museum for ethnographers and anthropologists. The average Indian bazaar is more crowded and colorful than most museums the world over. A modern Indian city street is filled with more vitality, color, sound, and smells than any theater or carnival on earth.

The ineffable fascination of modern India is a product of the complexity of its many ages of coexistent reality. Nothing is ever totally forgotten in this land of reincarnation.

Aryans loved to gamble almost as much as they enjoyed Soma. Even Yudhisthir, incarnate "King of Religion or Law (Dharma)", eldest of the Pandavas, could never resist a challenge at craps, and kept losing roll after roll, until his kingdom and entire fortune

were gone.

Mahabharat is uniquely rich in ancient Indian legend, lore, character, and custom. Shortly before the battle is joined, however, a brief religio-philosophic dialogue was inserted in the earlier epic. Called Bhagavad Gita, it has become more important to Hinduism than the rest of the rambling work.

The total number of Arabic, Persian, Afghan, Turkish, and Mongol Muslim invaders, who first conquered and then resided in India, was never more than 1 or 2 percent of the subcontinent's entire population. Genetically speaking, then, most Indian Muslims are Indian, and many, who follow the mystic Sufi paths toward God as taught by saintly Islamic Pirs in Kashmir or Lucknow or Bengal, resemble Hindu devotees of Vaishnava saints much more than orthodox Mullahs.

As great Goethe himself put it after first reading Shakuntala: "Willst du den Himmel, die Erde, mit einem Namen begreifen; Nenn'ich, Shakuntala, Dich, und so ist Alles gesagt."(Would you capture heaven and earth with a single name? I say to you then, Shakuntala, and all is said!")

Indian artists have celebrated and immortalized the beauty of human bodies in bronze and stone for more than 4,000 years. ... No other society, not even classical Greece or Roome, has produced so many godlike figures of humans as did India.

F. Max Muller in What can India teach us?

"If I were to look over the whole world to find out the country most richly endowed with all the

wealth, power, and beauty that nature can bestow – in some parts a very paradise on earth – I should point to India.

"If I were asked under what sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life, and has found solutions of some of them which well deserve the attention even of those who have studied Plato and Kant – I should point to India.

"And if I were to ask myself from what literature we, here in Europe, we who have been nurtured almost exclusively on the thoughts of Greeks and Romans, and of one Semite race, the Jewish, may draw that corrective which is most wanted in order to make our inner life more perfect, more comprehensive, more universal, in fact more truly human, a life, not for this life only, but a transfigured and eternal life – again I should point to India.

1. Zero.

"Indians had ease and power, in handling number, such as no other civilization in history ever possessed to the same degree, so much so that Indian culture regarded the science of numbers as the noblest of the arts."

Pierre Simon de Laplace, French mathematician, and astronomer, and a contemporary of Napoleon, said:

"It is India that gave us the ingenious method of expressing all numbers by ten symbols, each receiving a value of position as well as an absolute value, a profound and important idea which appears so simple to us now that we ignore its true merit. But, its very simplicity, the great ease that it has lent to all computations, puts our arithmetic in the first rank of useful inventions.

Stanley Wolpert, American historian, wrote in ***An Introduction to India*:**

"Mathematics is the science to which Indians have contributed the most. Our decimal system, place notation, numbers 1 through 9, and the ubiquitous 0, are all major Indian contributions to world science."

Professor G.B. Halsted emphasizes the vital significance of this invention, in ***Hogben's Mathematics for the Million thus:***

"The importance of the creation of the zero mark can never be exaggerated. This giving to airy nothing, not merely a local habitation and a name, a picture, a symbol, but helpful power, is the characteristic of the Hindu race whence it sprang."

A mathematics book prescribed by the New York State Education Department acknowledges this debt:

"The Western world owes a great deal to India for a simple invention. Without it, most of the great discoveries and inventions (including computers) of Western civilization would never have come about. This invention was the decimal system of numerals - nine digits and Zero. The technology of today could not have developed if we had only Roman system of numerals."

Lancelot Thomson Hagben quoted Dewzis in ***Mathematics for Millions:***

"The achievements of the unknown Hindu (Indian), assumes the importance of a world event!"

2. Numerals.

Professor MacDonnell wrote in ***History of Sanskrit Literature*:**

"There is in the first place, the great fact that the Indians invented the numerical figures used all over the world."

In the Western world, the cumbersome Roman numeral system posed as a major obstacle, and in China the pictorial script posed as a hindrance. But in India, almost everything was in place to favor such a development. There was already a long and established history in the use of decimal numbers, and philosophical and cosmological constructs encouraged a creative and expansive approach to number theory.

It is clear how much the world owes to India's brilliant civilization, and not only in the field of arithmetic; but also by opening the way to the concept of the number, the Indian scholars enabled the rapid development of mathematics and exact sciences.

George Ifrah, a French mathematician, saluted the Indian inventors of numbers saying that:

"Real inventors of this fundamental discovery, which is no less important than such feats as the mastery of fire, the development of agriculture, or the invention of the wheel, writing or the steam engine, were the mathematicians and astronomers of the Indian civilization: scholars who, unlike the Greeks, were concerned with practical applications and who

were motivated by a kind of passion for both numbers and numerical calculations. The Indian mind has always had for calculations and the handling of numbers an extraordinary inclination, ease and power, such as no other civilization in history ever possessed to the same degree."

Brian Clegg wrote in ***The Quest to Think the Unthinkable:***

"The characters we use for the numbers arrived here from India via the Arabic world. These symbols were gradually taken up by Arabs and came to Western attention in the 13th century thanks to two books, written by a traveler from Pisa, the other by a philosopher in Baghdad."

3. Mathematics.

In most of the countries of the world except India, ancient history does not exist because, the records of ancient history were systematically wiped out in the name of religion. A small portion of Vedic literature still exists. Even though mathematics is one Vedic gift of India to the world, there is a common notion among the Indian scholars that it is a sacrilege to question the opinions determined by the European Indologists concerning the contribution of India.

All Eurocentric inventions have led to the persistent habit of looking outside India for the origin of everything. In 1835, G. Thibaut translated a large portion of the Sanskrit Sulva Sutras, which are primarily instruction manuals for geometric construction of buildings and altars. They show that ancient Indians possessed a significant mathematical knowledge. Thibaut did not formulate the clear conclusion that Greeks were not the inventors of geometry, but it was Indians. The Greek scholars, however, saw that this was the message in Thibaut's paper. The question was, if Indians invented plane geometry, what was to become of "Greek genius?"

In 1978, Dr. Abraham Seidenberg presented his famous paper on the origin of mathematics. He argued that the birth of geometry and mathematics had a ritual origin. For origin of mathematics, Seidenberg concluded:

"Old theorem of Pythagoras is from India or that both Old- Babylonia and India got it from a third

source. Now the Sanskrit scholars do not give me a date so far back as 1700 B.C. Therefore, I postulate a pre-Old-Babylonian (i.e. pre- 1700 B.C.) source of the kind of geometric rituals we see preserved in the Sulva Sutras, or at least for the mathematics involved in these rituals."

Now with our new knowledge, Seidenberg's conclusion of India being the source of the geometric and mathematical knowledge of the ancient world fits in with the new chronology of the texts. According to the latest researches of scholars, Baudhayan compiled Sulva Sutras around 3200 B.C.

Van der Warden's book, Geometry and Algebra in Ancient Civilizations, takes a similar stand. Warden credits Seidenberg for making him look at the history of mathematics a new way. A. Seidenberg was investigating the question of the origin of mathematics. In his paper, in 1978, he established that the *Sulva Sutras* were the basis for the mathematics in Egypt, Babylon, and Greece.

4. Arithmetic, algebra, geometry, and trigonometry:

Professor Weber, after declaring that the Arabs were disciples of the Hindus, says:

"The same thing (the Arabs borrowed from Hindus) took place also in regard to algebra and arithmetic in particular, in both of which it appears the Hindus attained, quite independently, to a high degree of proficiency."

The English mathematician, Prof. Wallace, writes in ***Edinburgh Review***, Volume 29:

"The Lilavati treats of arithmetic, contains not only the common rules of that science, but the application of these to various questions of interest, barter, mixture, combinations, permutations; sums of progression indeterminate problems, and mensuration of surface and solids. The rules are found nearly as simple as in the present state of analytical investigation. The numerical results are readily deduced, and if they be compared with the earliest specimens of Greek calculation, the advantage of the decimal notation is placed in striking light."

Elphinstone says in ***Edinburgh Encyclopedia – Geometry:***

"In the Suryasiddhanta is contained a system of trigonometry, which not only goes far beyond anything

known to Greeks, but involves theorems which were not discovered in Europe till two centuries ago."

Professor Wallace further writes in ***Edinburgh Encyclopedia – Geometry:***

"The researches of the learned have brought to light astronomical tables in India, which must have been constructed by the principles of geometry, but the period at which they have been framed has by no means, completely ascertained. Some are of opinion that they have been framed from observations made at a very remote period, not less than 3,000 years before the Christian era (this has been conclusively proved by Mons. Baily); and if this opinion be well founded, the science of geometry must have been cultivated in India to a considerable extent long before the period assigned to its origin in the West; so that many elementary propositions may have been brought from India to Greece."

The Sulvasutras date from about 3000 years before the Christian era and Dr. Thibaut has shown that geometrical theorem of the 47th proposition, Book I, which tradition ascribes to Pythagoras, was solved by Hindus many centuries earlier, thus confirming the conclusion of V. Schroeder that the Greek philosopher owed his inspiration to India.

Professor Monier Williams says in ***Indian Wisdom:***

"To the Hindus is due the invention of algebra and geometry and their application to astronomy."

Spottiswoode writes in ***J.R.A.S. Volume*** XVII:

"It must be admitted that the penetration shown by Bhaskarachrya in his analysis is in the highest degree remarkable that the formula which he establishes, and his method, bear more than a mere resemblance, they bear a strong analogy to the corresponding process in modern mathematical astronomy; and that the majority of scientific persons will learn with surprise the existence of such a method in the writings of so distant a period and so remote a region.".

5. Cotton:

Dr. Stanley Wolpert, Professor of history at UCLA wrote in ***India***:

"Ancient Indians were the first humans to spin and weave cotton into cloth that continues to provide our most comfortable summer attire."

Dr. James A.B. Scherer, author of ***Cotton as World Power*** wrote:

"India is the original home of cotton. Cotton cloth was first seen in Europe when the soldiers of Alexander brought some of it back as a curiosity, in the fourth century before Christ. All India was clothed with it then, as today."

Centuries passed before the new goods made any impression on England. When cotton goods did begin to come in, which was then styled, **"the flower and strength, the revenue and blood of England."**

Will Durant wrote in **Our Oriental Heritage**:

"The growing of cotton appears earlier in India than elsewhere; apparently it was used for cloth in Mohenjo-daro."

During the excavations at Mohenjo Daro a small fragment of cotton fabric and a small piece of cotton string in the neck of a silver vessel were recovered.

The quality of both the fabric and the string leaves no doubt that a mature textile craft had existed in the Indus Valley Civilization.

The Indus cotton industry was well developed and some methods used in cotton spinning and fabrication continued to be used until the modern industrialization of India. In the first century, Arab traders brought fine muslin and calico from India and sold it to Italy and Spain. The Moors introduced the cultivation of cotton into Spain in the 9th century. Little cotton cloth was imported to England before the 15th century, although small amounts were obtained chiefly for candlewicks. By the 17th century the East India Company was bringing rare fabrics from India.

In our oldest reference to cotton, Herodotus says with pleasing ignorance:

"Certain wild trees there (in India) bear wool instead of fruit, which in beauty and quality excels that of sheep; and the Indians make clothing from these trees. It was their wars in the Near East that acquainted the Romans with this tree-grown wool."

Arabian travelers in the ninth century India reported that:

"In this country they make garments of such extraordinary perfection that nowhere else is their like to be seen – sewed and woven to such a degree of fineness, they may be drawn through a ring of moderate size."

The medieval Arabs took over the art from

India, and their word *quattan*, from Indian word *Kantan* became our word *cotton*. The name *muslin* was originally applied to fine cotton weaves made in Mosul from Indian models; calico was so called because it came first in 1631 from Calicut of India.

Native Americans skillfully spun and wove cotton into fine garments and dyed tapestries, almost the same time as in Indus Valley. When South American cotton is studied, after a series of painstaking experiments, experts have agreed that one parent of the American cotton undoubtedly came from the Indus Valley area. Evidence of the Asian ancestry of American cotton is irrefutable.

6. Fabric weaving:

Orme wrote in ***People and Government of Hindustan:***

"The hand of the Indian cook wench shall be more delicate than that of a European beauty. The skin and features of a porter shall be softer than those of a professed petit maitress. The women wind off the raw silk from the pod of the worm. A single pod of the raw silk is divided into 20 different degrees of fineness, and so exquisite is the feeling of these women that whilst the thread is running through their fingers so swiftly, that their eye can be of no assistance, they will break it off exactly as the assortments change at once from the first to twentieth, from the nineteenth to the second."

It appears that nature herself has bestowed the gift of excellence in arts and manufacturers on the patient, skilful Indian. The other nations appear to be constitutionally unfit to rival the Indians in the finer operations of the loom, as well as in other arts that depend upon the delicacy of sense.

James Mill wrote in ***History of India*** Volume II:

"His (Indian) climate and soil conspired to furnish him with the most exquisite material for his art the finest cotton which the earth produces."

This shows that India was capable of producing, and in ancient times did produce, the finest cotton used

in weaving. In those days India had not to look to Egypt and America for cotton of a superior quality to enable her to manufacture finer muslins to clothe her sons and daughters. It would be interesting to many to learn that the cotton is thought to have reached Europe in the time of the Crusade.

Elphinstone wrote in ***History of India*:**

"The beauty and delicacy (of Indian cotton cloth) was so long admired, and which, in fineness of texture, has never yet been approached in any country."

Murray wrote in ***History of India*:**

"Its fabrics, the most beautiful that human art has anywhere produced, were sought by merchants at the expense of the greatest toils and dangers."

Thomson wrote in ***British History of India***:

"Indian muslins are fabrics of unrivalled delicacy and beauty."

Historian James Mill wrote in ***History of India*:**

"Of the exquisite degree of perfection to which the Hindus have carried the production of the loom it would be idle to offer any description; as there are few objects with which the inhabitants of Europe are better acquainted. Whatever may have been that attainment in this art of other nations of antiquity, the manufacturer of no modern nation can, in delicacy

and fineness, vie with the textiles of Hindustan."

German Professor Heeren, as mentioned in ***Ancient and Medieval India, Volume II*** wrote:

"The variety of cotton fabrics mentioned even by the author of Periplus as articles of commerce is so great that we can hardly suppose the number to have increased afterwards."

Dr. Forbes Watson gave an interesting account in his ***Textile Manufacturers of India*** that a series of experiments made on both the European and the Indian muslins, to determine their claims to superiority. The result was altogether in favor of the Indian fabrics.

7. Indigo dyeing:

Professor Weber wrote in ***Indian Literature*:**

"The skill of the Indians in the production of delicate woven fabrics, in the mixing of colors, the working of metals and precious stones."

Indigo is mainly used in dyeing technology. As regards dyeing, Elphinstone wrote in ***History of India***:

"The brilliancy and permanence of many of the dyes have not yet been equaled in Europe. The brilliancy of their dyes is remarked on as well as their skill in manufactures and imitations of foreign objects."

James Mill admitted (as mentioned in ***Manning's Ancient and Mediaeval India***, Volume II):

"The Indian colors are the most brilliant on earth. The Hindus were the earliest nation who discovered the art of extracting colors from plants. The names by which several plants are known in foreign countries bear testimony to this fact. Indigo is so called after India. Pliny used to write Indico."

Bancroft who gave much praise to the native in ***Mill's India Volume II*** said:

"Native of India for having so many thousand years ago discovered means by which the colorable

matter of the plants might be extracted, oxygenated and precipitated from all other matters combined with it."

James Mill wrote in ***Mill's India Volume II*:**

"Among the arts of the Hindus, that of printing and dyeing their cloths has been celebrated; and the beauty and brilliancy, as well as durability of the colors they produce, are worthy of particular praise."

Indigo was the earliest major center for Indigo's production and processing. Indigo, used as a dye, made its way to the Greeks and Romans, where it was valued as a luxury product. India is the oldest center of indigo dyeing in the world. It was a primary supplier of indigo to Europe as early as the Greco-Roman era. The association of India with indigo is reflected in the Greek word for the 'dye' as indikon (Indian). The Romans latinized the term to indicum, which passed into Italian dialect and eventually into English as the word indigo.

Indigo is among the oldest dyes to be used for textile dyeing and printing. Many Asian countries like China, Japan and South East Asian nations, which were under cultural influence of India, have also used indigo as a dye, particularly silk dye for centuries. The dye was also known to ancient civilizations in Mesopotamia, Egypt, Greece, Rome, Britain, Mesoamerica, Peru, Iran, and Africa. All these nations imported indigo from India.

In Mesopotamia, a neo-Babylonian cuneiform tablet of the 7th century B.C. gives a recipe for dyeing

of wool. Indigo was most probably imported from India. The Romans used indigo as a pigment for painting and for medicinal and cosmetic purposes. It was a luxury item imported to the Mediterranean from India by Arab merchants.

Indigo remained a rare commodity in Europe throughout the Middle Ages. Woad, a chemically identical dye derived from the plant Isatis tinctoria (Brassicaceae), was used instead. In the late fifteenth century, the Portuguese explorer Vasco da Gama discovered a sea route to India. This led to the establishment of direct trade with India. Importers could now avoid the heavy duties imposed by Persian, Levantine, and Greek middlemen and the lengthy and dangerous land routes which had previously been used. Consequently, the importation and use of indigo in Europe rose significantly. Newton used indigo to describe one of the two new primary colors he added to the five he had originally named in his revised account of the rainbow in Lectiones Opticae of 1675. Because of its high value as a trading commodity, indigo is often referred to as Blue Gold.

8. Mango is a gift of India to world:

"India taught us to domesticate chicken, to play chess, to gamble with dice, ***to love mangoes*** *and elephants."*

---- Dr. Stanley Wolpert, Professor of History at University of California (UCLA), in ***India***:

Native to India, the mango is purportedly the most widely consumed fruit in the world today. Mangoes are mentioned in many theological writings, including the Vedas, and the Ramayan, India's second largest epic.

The word *mango* comes from Latin *Mangifera Indica*, meaning mango-bearing plant from India. In Latin, it came from the Dravidian word *mankay;* Botanically, mango is a member of the family, which includes poison ivy, cashews, and pistachios.

The center of origin was revealed to be northeast India, after fossil records were found there dating back to millions of years. Cultivation and domestication of mangoes began in the Indian subcontinent, where they have been grown for thousands of years. Indian monks took mango plants on voyages to eastern Asia. Persian traders had taken mango to the Middle East and East Africa. The Portuguese later spread it to South America, the Philippines and to West Africa. Mangoes account for approximately 50 percent of all tropical fruits produced worldwide. According to the Food and

Agriculture Organization of the United Nations, India accounts for almost half of the world production, followed by China, Pakistan, Mexico, and Thailand. The aggregate production of 10 countries is reponsible for roughly 80 percent of the entire world's mango production.

Mango today is considered one of the most popular fruits in the world. During the 16th century, the sea-faring Portuguese introduced the mango to Africa, who then took their tasty cargo to Brazil in the 1700s. It reached Mexico in the early 19th century, and finally reached the United States in 1860. Today, more and more consumers are discovering the unique, mouth-watering flavor of the nutritious mango.

In western recipes of Chutney, ripe mangoes are often used, but chutney in the Indian subcontinent is usually made with sour, unripe mangoes and green chilis. In Andhra Pradesh, mangoes are used to make the spicy pickle known as Avakaya Pachhadi. In Kerala, ripe mangoes are used in a dish called Mambazha Kaalan. In Goa, Miscut is a spicy mustard-oil pickle made from raw mangoes. In Maharashtra, Moramba is a famous delicacy that can be made in different ways. A spicy, sweet and sour semi-liquid side-dish called Methamba is made from unripe mango slices called Kairi, Jagerry and Fenugreek seeds. Mango Lassi is made by adding mango pulp to the North Indian yogurt drink.

9. The Game of Chess originated in India:

Chess originated in India during the Gupta empire, where its early form in the 6th century A.D. was known as *Chaturang*, which translates as "four divisions of the military: infantry, cavalry, elephantry, and chariotry", represented by the pieces that would evolve into modern Pawn, Knight, Bishop, and Rook, respectively. The terms of this game are seen in Mahabharat and earlier Purans, also. According to recent researches, in India this game seems to be very ancient.

In Sassanid Persia around 600 A.D. the name became *Chatrang* and the rules were developed further, and players started calling out *sh'h* (Persian for "king"), when attacking the opponent's king, and *Sh'h m't* (Persian for the "King is finished"), when the king was attacked and could not escape from attack; these exclamations persisted in chess as it traveled to other lands thereafter.

In Sanskrit, *Chaturang* literally means "having four limbs" and *epics* often means "army with the four divisions of elephants, chariots, horsemen, and foot-soldiers". The name came from a battle formation mentioned in the Indian epic *Mahabharat*. The game *Chaturanga* was a battle simulation game which rendered military strategy of the time.

The Arab scholar Abu al-Hasan Ali al-Masud detailed the use of chess as a tool for military strategy, mathematics, gambling and even its vague association with astronomy in India and elsewhere. Masudi notes that in India, ivory was chiefly used for the production

of chess and backgammon pieces, and asserts that the game was introduced to Persia from India along with the book *Kelileh va Demneh*, during the reign of emperor Nushirwan.

Dr. Will Durant, famous American author on civilization wrote in ***Our Oriental Heritage:***

"It is true that even across the Himalayan barrier India has sent to us such questionable gifts as grammar and logic, philosophy and fables, hypnotism and chess, and above all, our numerals and our decimal system."

Dr. Stanely Wolpert, Professor of history at University of California (UCLA) wrote in ***India:***

"Thanks to India, we reckon from zero to 10 with misnamed Arabic numerals and use a decimal system without which our modern computer age would hardly be possible. Ancient Indians were the first humans to spin and weave cotton into cloth that continues to provide our most comfortable summer attire. Indians taught us to domesticate and eat chicken, to play chess, to gamble with dice, to love mangoes and elephants, to stand on our heads for good health, to believe in the coexistence of contradiction, and to appreciate the beauty and universal possibility of nonviolence."

Dr. A.L. Basham, Professor of Asian History at various universities wrote in ***Wonder that Was India:***

"As well as her special gifts to Asia, India has

conferred many practical blessings on the world at large; notably rice, cotton, the sugarcane, many spices, the domestic fowl, the game of chess, and most important of all, the decimal system of numeral notation."

The variations of chess familiar to Europeans and Americans traveled through Iran (Persia) to the main commercial centers of Italy and Spain by about 1000 A.D. A bit later, sea-faring Vikings carried the game into Scandinavia and Iceland. By 1100 – 1200 A.D. the game became known in central Europe, and was well established across all of Europe by 1400 A.D. with the game rules, which we use today. However, Russia's dominence of chess is recent, dating from the Communist revolution of 1917, after which government schools for talented chess players were established.

In September 2007, Vishwanathan Anand of India became the champion by winning a championship tournament. In October 2008, Vishwanathan Anand retained his title, decisively winning the rematch against Kramnik of Russia.

10. Ancient India taught world how to domesticate chicken.

According to Dr. Stanley Wolpert, Professor of history at UCLA Indians taught world to domesticate and eat chicken and elephants.

Professor A.L. Basham of Australian University wrote:

"India has conferred many practical blessings on the world at large; notably rice, cotton, the sugar cane, many spices, the domestic fowl, and most important of all, the decimal system of numeral notation."

There are more chickens in the world than any other bird. Humans keep chickens primarily as a source of food, consuming both their meat and their eggs.

According to author Zeuner FE in ***A History of Domesticated Animals;***

"Domestication of chicken has been observed at the Indus Valley as early as 3,200 B.C. and it is believed to be the epicenter of chicken domestication. The chicken (Gallus gallus domesticus) is domesticated fowl."

From India, the domesticated fowl made its way to western Asia Minor. Domesticated fowls were imported by Greece by the fifth century B.C. Fowl had

been known in Egypt since the 18th Dynasty, with the bird that lays everyday.

The meat of the chicken, also called chicken is a type of poultry meat. Because of its relatively low cost, chicken is one of the most used meats in the world. Nearly all parts of the bird can be used for food and the meat can be cooked in many different ways. Popular chicken dishes include roasted chicken, fried chicken, chicken soup, Buffalo wings, tandoori chicken, butter chicken, and chicken rice. Chickens are sometimes kept as pets and can be tamed by hand feeding, but roosters are aggressive and noisy.

In ancient India and Southeast Asia, a game of fighting amongst chickens was popular. Domestic fowls served as clocks in villages. Chickens with striking plumage have long been kept for ornamental purposes, including feather-footed varieties such as the Cochin from Vietnam, the Silk from China, and the extremely long-tailed Phoenix from Japan. Asian ornamental varieties were imported into the United States and Great Britain in the late 1800s.

11. India was the first country to domesticate elephants.

Professor Stanley Wolpert of University of California wrote in his book ***India:***

"Indic civilization has enriched every art and science known to us. Thanks to India, we reckon from zero to ten with misnamed Arabic numerals and use a decimal system without which our modern computer age would hardly be possible. Ancient Indians were the first humans to spin and weave cotton into cloth... Indians taught us to domesticate chicken, to play chess, to gamble with dice, to love mangoes and ***elephants."***

Elephants have been an integral part of India's cultural history, dating as far back as the Vedic period. References are made in these early times to their domesticity and tameness. Seals found in the Indus Valley about 5000 to 6000 years old, suggest that the elephant was first domesticated in ancient India.

Elephants are also mentioned in epical histories of Ramayan and Mahabharat also. In Ramayan Balkand Sarga 6 and 42 elephants are mentioned. Elephants are also mentioned in the epic Mahabharat in army and weaponry. On 15th day of war, king Drupad and king Virat were slain by Drona. Because Drona was very powerful and unconquerable having irresistible Brahamastra, Krishna hinted to Yudhisthir that Drona would give up his arms if his son Ashwasthama died. Bhim proceeded to kill an elephant

named Ashwasthama, and loudly proclaimed that Ashwasthama was dead. Drona approached Yuddhisthir to seek the truth of his son's death. Yudhisthir proclaimed Ashwasthama Hatahath, Naro va Kunjaro va, implying Ashwasthama had died but he was not sure weather it was a Dron's son or an elephant. Dron was then killed by Dhristdumna to avenge his father's death and satisfy his vow.

The word elephant came from Arabian Aleph-e-Hind meaning ox from India. Olifant and its variations are archaic spellings of elephant. Aside from elephants, the word has been used to refer to ivory, elephant tusks, musical horns made of elephant tusks or a musical instrument resembling such horns. It appears in Middle English as olifant or olifaunt and was borrowed from medieval French olifanz. In Douch, olifant means elephant. The French word owes something to both Old High German olbenta 'camel' and to Latin elephantus 'elephant', a word of Greek origin. Olbenta is a word of old Germanic origin.

Chapter Three

Peoples of India by ***William H. Gilbert*** Jr., Specialist in Sociology and Anthropology, Legislative Reference Service, Library of Congress, Smithsonian Institution, City of Washington.

3.1 Pepper
3.2 Cardamum.
3.3 Orange
3.4 Lemons.
3.5 Tea.
3.6 Milk.

In the history of human culture the contribution of the Indian peoples in all fields has been of the greatest importance. **From India we are said to have derived domestic poultry, shellac, lemons, cotton, jute, rice, indigo, the buffalo, cinnamon, ginger, pepper, cane sugar, the games of chess, parchesi, and polo, the zero concept, the decimal system, the basis of certain philological concepts, a wealth of fables with moral import, an astonishing variety of artistic products, and innumerable ideas in philosophy and religion such as asceticism and monasticism.** To the west India exported her strange castes of gypsies, to the east her psychological and religious system of Buddhism. Primitive peoples throughout oceania and southeastern Asia show many indications of Indian influences, as in the caste systems of Polynesia or the mythic dramas of Bali.

3.1. Pepper.

Cardamom is considered Queen of Spices and Pepper is considered King of Spices. ***Pippali*** *is Sanskrit for Long pepper and* ***marica*** *is Sanskrit for Black pepper. Black peppers are native to India. The word pepper is ultimately derived from the Sanskrit* ***pippali****, the word for Long pepper via the Latin* ***piper****. The English word for pepper is derived from the Old English* ***pipor.*** *The Latin word is also the source of German* ***feffe****r, French* ***poivre****, and Dutch* ***pepper****.*

Peppercorns are often categorized under a label describing their region or port of origin. Two well-known types come from India's Malabar Coast, Malabar pepper and Tellicherry pepper. Tellicherry is a higher-grade pepper made from the largest, ripest 10 percent of fruits from Malabar plants grown on Mount Tellicherry. Sarawak pepper is produced in the Malaysian portion of Borneo, Lampung pepper on Indonesia's island of Sumatra. White Muntok pepper is another Indonesian product from Bangka Island. Vietnam peppers are White and Black pepper.

Pepper has been used as a spice in India since prehistoric times. J. Innes Miller notes that while pepper was grown in southern Thailand and in Malayasia, its most important source was India. Peppercorns were a much prized trade commodity

often referred to as black gold and used as a form of commodity money.

Black peppercorns were found stuffed in the nostrils of Ramesses II, placed there as part of the mummification rituals shortly after his death in 1213 B.C. Peppers, indigo, linen and tamarind wood chips were exported then from India to Egypt.

The competition for this valuable spice has been fierce for over 2000 years and spurred exploration and the discovery of the New World by Christpher Columbus.

During the middle ages, when the trade was monopolized by the Portuguese and later the Dutch, pepper was so valuable that it was worth more than gold by weight, and individual peppercorns were widely accepted as legal currency. Workers who handled pepper were issued clothes without pockets or cuffs to prevent theft.

Today, pepper still accounts for one-fourth of the world's spice trade. Tunisians lead in pepper consumption with half a pound per person per year, whereas Americans consume about one-quarter pound per year.

Pepper has been moving westward from India for 4,000 years. It has been used in trading as an exchange medium like money and at times, has been valued so highly that a single peppercorn dropped on the floor would be hunted like a lost pearl. In classical times tributes were paid in pepper, and both Attila, the Hun and Alaric I, the Visigoth demanded pepper as a substantial part of Rome's ransom.

As of 2008, Vietnam is the world's largest producer and exporter of pepper, producing 34 percent of the

world's crop. Other major producers include India (19 percent), Brazil (13 percent) Indonesia (9 percent), Malaysia (8 percent), Sri Lanka (6 percent), China (6 percent) and Thailand (4 percent).

3.2. Cardamom.

The McCormic/Schilling Guide to Gourmet Spices states that cardamom, Native to *cardamom* may have been derived from Sanskrit ***kardamum.*** *Appended to the Atharva Veda is the Ayur Veda (The science of longevity). In this oldest system of Hindu (Indian) medicine, treatment is recommended with herbs. Many of its diagnoses and cures are still used in India, with a success that is sometimes the envy of Western physicians. The Ayur Veda names over a thousand such plants. Cardamom is one of these herbs."*

---- Will Durant, American author in ***Story of Civilization.***

Another Sanskrit name for cardamom is *el*. In India it is called *ilaayachee* or *elchi*. It is called *alaichi* in Nepali and Velchi in Marathi. In Malayalam, it is *aelam*. In Telugu and Tamil, it is *elakkai*, and in Kannada it is *yelakki*.

The name *cardamom* is used for herbs within two genera, *Elettaria* and *Amomum*. Both varieties take the form of a small seedpod, triangular in cross-section and spindle-shaped, with a thin papery outer shell and

small black seeds. *Elettaria* pods are light green in color, while *Amomum* pods are larger and dark brown.

Amomum, black cardamom, brown cardamom, *kravan*, Java cardamom, Bengal cardamom, Siamese cardamom, white or red cardamom is distributed mainly in Asia and Australia. Indian cardamom is smaller but more aromatic.

Although India is the largest producer of cardamom, only a small share of the Indian production is exported because of the large domestic demand. The main exporting country is Guatemala, where all cardamom is grown for export only. Both forms of cardamom are used as flavoring in both food and drink, as cooking spices and as a medicine. Elettaria cardamom is used as a spice, a masticator, and in medicine; it is also smoked sometimes. Green cardamom in South Asia is broadly used to treat infections in teeth and gums, to prevent and treat throat troubles, congestion of the lungs and pulmonary tuberculosis, inflammation of eyelids and also digestive disorders. It also is used to break up kidney stones and gall stones, and was reportedly used as an antidote for both snake and scorpion venom.

Amomum is used as a spice and as an ingredient in traditional medicine in systems of the traditional Chinese medicine in China, in Ayur Veda in India, in Japan, Korea and Vietnam. Amomum cultivated in China, Laos and Vietnam is used in traditional Chinese Medicine to treat stomach-aches, constipation, dysentery, and other digestion problems. *Tsaoko* cardamom *Amomum tsao-ko* is cultivated in Yunnan, China and northwest Vietnam, both for medicinal purposes and as a spice. Increased demand since

1980s, principally from China, for both *Amomum villosum* and *Amomum tsao-ko* has provided a key source of income for poor farmers of China, Laos and Vietnam.

3.3 Orange.

"Orange suffered an identity crisis, having no name in European languages until orange, the fruit arrived from Asia. The anscestor of the modern orange grew wild in North India and eventually came by boats to Europe. India has two Sanskrit names for this fruit, ***naranga*** *and* ***santara.***

Naranga became naranj in Arabic, then the English altered it to ***orange, santara*** *got modified to the Portuguese* ***cintra*** *hence* ***citrus*** *and related words."* --- According to the December 1999 issue of ***Hinduism Today.***

The Sanskrit word was borrowed into European languages through Persian *narag*, Arabic *naranj*, Latin *arangia*, Italian *arancia*, and Old French *oreng*. The name of the color is derived from the fruit, first appearing in this sense in 1542.

Orange, the round-shaped, orange colored fruit, immensely rich in vitamins and minerals is one of the favorite fruits of the world. The scientific name of the sweet variety of orange is citrus sinensis. The name of the fruit is derived from the Sanskrit Naranga, and became orange in English. Different varieties were in India, which date back almost 7,000 years. It was grown in the orchards of China from the first century

of the millennium.

Among the Europeans, Romans were the first to taste this juicy fruit. It reached the Roman Empire around the first century B.C. through Persian traders who had trade relations with India. It became quite popular among the nobility and military classes. The Romans developed the first orchard of oranges in North Africa, sometime around the first century A.D. The 6th century witnessed the decline of the Roman Empire and the rise of the Islamic Caliphate. Under the domination of the Islamic Caliphate in the 7th century, led to the closure of trade routes to Mediterranean countries, and instead started trade routes towards the Middle East. However, the sweet variety of oranges reached Europe in the 16th century A.D.

The Spanish explorers arrived in South America in the 15th century and probably initiated orange cultivation in the Sao Paulo coast, around the 16th century. Today, the South American country, Brazil, is the leading producer of oranges. Brazil accounts for almost half of the world's total production of oranges.

Orange is a rich source of vitamin C, folic acid, vitamin B6, and dietary fiber and potassium, calcium, phosphorus, magnesium, copper, etc. The orange does not contain harmful cholesterol and fats. It can be of immense help in many ailments like high blood pressure, hardening of arteries, constipation, heart disease and stomach ulcer. It contains antioxidants, which are effective in protecting the body from harmful free radicals.

3.4 Lemons.

"The exact origin of the lemon is unclear but it is thought to have originated in Southeast Asia (known as Greater India before World War II) where they have been cultivated for around 4000 years as some old Oriental writings would testify. The citron was carried to the Middle East between 400 BC and 600 BC but it was the Arab traders in Asia, who introduced lemons to eastern Africa and the Middle East between 100 AD and 700 AD

--- Julia F. Morton writes in ***Lemon:Fruits of warm climates:***

The exact origin of the lemon has remained a mystery, though it is widely presumed that lemons first grew in India. In South Asia and South East Asia, it was known for its antiseptic properties and it was used as an antidote for various poisons. Lemons entered Europe no later than the first century A.D. It was later introduced to Persia and then to Iraq and Egypt around 700 A.D. The lemon was first recorded in literature in a 10th century Arabic treatise on farming. It was distributed widely throughout the Arab world and the Mediterranean region between 1000 AD and 1150 AD.

The true origin of the lemon tree remains a mystery, though speculations are possible. Presently, it is known for its wide spread in the Mediterranean area, but scientists claim it may have been brought from

India. In the United States, Florida is known for its large lemon tree orchards.

The first real lemon cultivation in Europe began in the middle of the 15th century. In 1493, Columbus brought lemon seeds to Hispaniola. Spanish conquest throughout the New World helped spread lemon seeds. It was mainly used as ornament and medicine. In 1700s and late 1800s, lemons were increasingly planted in Florida and California when lemons began to be used in cooking and flavoring.

The Old French *limon*, the Italian *limone*, the Arabic *laymen* and the Persian *limun* all came from the Indian word *limbu*. Thus India is the origin of the word *lemon*.

Even today, India tops the production list with 16 percent of the world's overall output followed by Mexico 14.5 percent, Argentina 10 percent, Brazil 8 percent and Spain 7 percent. Of world production of 13,032,388 tons, India produces 2,060,000 tons, Mexico 1,880,000 tons, Argentina 1,260,000 tons, Brazil 1,060,000 tons, Spain 880,000 tons, China 745,000 tons, USA 722,000 tons, Turkey 706,652 tons, Iran 615,000 tons and Italy 546,584 tons.

3.5 Tea.

"Tea, the national drink of the Anglo-Saxons is an indirect Indian legacy to Western civilization. It is also a favored drink of the Chinese, Japanese, Russians, and others. The original home of this shrub was Assam in India, and from there in the third century A.D. it traveled to China and by the middle of the seventeenth Century it appeared in England and attracted especially women who preferred them to the stuffy tea houses in the congested city. Scholars too were attracted. Dr. Samuel Johnson and Boswell lent distinction to these gardens."

---- D.P. Singhal, Professor of History at the University of Queensland, in ***India and the World civilization***:

Assam tea is a black tea named after the region of its production and is the world's largest tea-growing region, lying on either side of the Brahmaputra River, and bordering Bangladesh and Myanmar. During the monsoon period, there is as much as 10 to 12 inches of rain per day. The daytime temperature rises to about 103F, creating green-house-like conditions of extreme humidity and heat. This tropical climate contributes to Assam's unique malty taste, a feature for which this tea is well known. Assam tea is manufactured specifically from the plant Camellia Sinensis.

English breakfast tea, Irish breakfast tea, and

Scottish breakfast tea are common generic names of Assam tea. Though Assam generally denotes the

distinctive black teas from Assam, the region produces smaller quantities of green and white teas as well. Assam tea revolutionized tea drinking habits in the 19th century.

Chinese legends credit a monk called Gan Lu, whose family name was Wu-Li-chien, with traveling to India during the Later Han Dynasty, A.D. 25-221, to pursue Buddhist studies. Gan Lu is said to have taken seven tea plants home to China from India, which he planted on Meng Mountain in Szechwan.

Tea first reached Europe by 1609, gaining particular popularity in France, Holland, England, and Russia. By the mid-18th century, tea was being exported in great quantities to the colonies in America. Despite the huge taxes levied on tea in 1773 by the British crown and the subsequent dumping of tea in Boston Harbor during the Boston Tea Party, tea drinking remained, as it still does, a popular and relaxing activity. Japanese legends ascribe the origin of tea in China to the Indian monk Bodhidharma (ca. 460-534), a monk born near Madras, India, and the founder of the zch'an (or Zen) sect of Buddhism.

3.6 Milk.

India is expected to maintain the record of being the world's largest milk producing country with an estimated 110 million tons of milk. Within the country, farmers' milk cooperatives showed a better performance. They procured about 9.2 million tons, an increase of 9.7 percent over the previous year. The cooperative sector covered about 21 percent of the country's villages and over 18 percent of the total milk-producing households in rural areas.

The NDDB had prepared a 173 billion Rs. plan for the next 15 years to increase milk production with better productivity, substantially strengthening and expanding the infrastructure for procurement and human resources development. The NDDB had also set up a Center for Analysis and Learning in Livestock and Food at Anand, in central Gujarat. It would provide reliable and efficient laboratory services for livestock, dairy and food sectors. Furthermore, the annual rate of growth in milk production in India is between 5-6 percent, against that of the world at 1 percent. The steep rise in the growth pattern has been attributed to a sustained expansion in domestic demand, although per capita consumption is modest.

India's annual milk production has more than tripled in the last 30 years, rising from 21 million tons

in 1968 to an anticipated 80 million tons in 2001. This rapid growth and modernization is largely credited to the contribution of dairy cooperatives, under the

Operation Flood (OF) Project, assisted by many multi-lateral agencies, including the European Union, the World Bank, and WFP (World Food Program). In the Indian context of poverty and malnutrition, milk has a special role to play for its many nutritional advantages as well as providing supplementary income to some 70 million farmers in over 500,000 remote villages.

India is the largest milk producer with the United States of America at number two, followed by the Russian Federation, Pakistan, Brazil, Ukraine, Poland, New Zealand, and Australia. Most milk is obtained from dairy cows. In the United States, and in many industrialized countries, raw cow's milk is processed before it is consumed. During processing the fat content of the milk is adjusted, various vitamins are added, and potentially harmful bacteria are killed. Milk is also used to make butter, cream, yogurt, cheese, ghee and a variety of other products.

With the development of the dairy industry in the United States, a variety of machines for processing milk were also developed. During the Civil War, condensed milk was used by Union troops. In 1863, Louis Pasteur of France developed a method of heating wine to kill the microorganisms that cause wine to turn into vinegar. Later, this method of killing harmful bacteria was adapted to a number of food products, including milk, and became known as pasteurization.

Chapter Four

INDIA'S CONTRIBUTION IN OTHER FIELDS:

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Technology:

1.1 Town Planning.
1.2 Housing
1.3 Spinning Wheel
1.4 Steel
1.5 Perpetual Motion.
1.6 Digging Gold
1.7 Diamond Cutting.

1:1 Town Planning:

American authority on civilization and author of Story of Civilization Will Durant wrote in **Case for India**:

"Recent excavations at Mohenjo Daro have revealed a civilization of 3500 B.C. with great cities and industries, ***comfortable homes,*** *and luxury ranging from bathrooms to statuary and jewelry; all beckoning a social condition superior to that prevailing in Babylonia and Egypt."*

Dora Jane Hamblin and editors of Time-Life Books wrote in ***The First Cities***:

"Probably the very first 'first city' in which a 20th Century visitor could have found his way around without the aid of a native guide was Mohenjo daro. It lay on the flat, hot flood plain of the Indus River, 300 miles north of today's Karachi in Pakistan. (There was no Islam nor Pakistan, then.) It (Mohenjo Daro) and the half dozen other cities of the Indus Valley had already put to use the criss-cross gridiron system of street layout – an urban convention long thought to have been invented by the Greeks of a later era."

Archeologist Sir John Marshall, who discovered Mohenjo Daro, wrote in ***Prehistoric Civilization of the Indus:***

"These discoveries establish the existence in Sind and the Punjab, during the fourth and third

millennium B.C., of a highly developed city life; and the presence in many of the homes, of wells and bathrooms as well as elaborate drainage-system, betoken a social condition of the citizens at least equal to that found in Sumer, and superior to that prevailing in contemporary Babylonia and Egypt. Even at Ur, the houses are by no means equal in point of construction to those of Mohenjo daro."

It was not until 1920, when archeologists got around to excavating Harappa, 400 miles from Mohenjo Daro, that the existence of a whole network of oddly modern ancient cities was suspected. The ruins of Mohenjo Daro and Harappa indicate that these twin cities grew according to a central plan that had been conceived at their foundation – much as in Washington D.C.

1.2 Housing.

Dora Jane Hamblin, editor of Time-Life books Publication ***The First Cities*** writes:

"Probably the very first First City in which a 20th Century visitor could have found his way around without the aid of a native guide was Mohenjo-Daro (Indus Valley)."

Mohenjo Daro and Harappa, dominating a cultural area of more than 500,000 square miles, were designed with wide streets, rectangular blocks, and efficient drainage in accordance with a well-organized plan. In deed, evidence from the ruins points to a degree of control and planning under some central civic authority unprecedented in the history of early civilizations. These twin cities grew according to a central preconceived plan that had been conceived at their foundation – much as Washington, DC to this day follows the conception of George Washington's French planner, Pierre L'Enfante.

As long ago as 3500 B.C. these and the half dozen other cities of the Indus Valley had already put to use the criss-cross gridiron system of street layout – an urban convention long thought to have been invented by the Greeks of a later era. Mohenjo daro was planned with a broad boulevard 30 feet wide, running north and south, and crossed at right angles every 200 yards or so by somewhat smaller east-west streets. Along these impressive avenues were shops

and food-stands. The wide main streets bordered

rectangular city blocks that measured about 400 yards in length and 200 yards in width, far larger than a typical block in modern Manhattan.

Each city at its peak covered an area of six or seven square miles and could house some 20,000 to 50,000 people, a very large urban population for that period. Cities like these could have been built and sustained only by a very prosperous and resourceful people. Cotton and wheat were grown in the fertile fields near Mohenjo Daro, and the surplus wealth accumulated from this produce served both to support the inhabitants and to promote a lively trade.

The grid layout is only one indication of the perception and care that had gone into the planning of the city. Houses presented blank walls to the streets, an architectural scheme that persists today in much of the nearest for protection against the sun, prying eyes and thieves.

Dora Hamblin added:

"But of all amenities provided by Mohenjo Daro and other well-laid out cities of the Indus Valley, none were more sophisticated than those that were devoted to public hygiene. Never before, and never again until Greek and Roman times, was so much attention paid by human beings to sanitation."

Running along the sides of the streets were neat, brick-lined open sewers much like those in old Asian cities today, and at intervals there were catch basins dug below sewer level to trap debris that might

otherwise have clogged the drainage flow. The sewers were connected to each house by an open gutter, also constructed of brick, into which emptied the house drains, which generally consisted of an enclosed system of clay pipes. These houses contained sit-down toilets – imposing structures of brick. They were not simple commodes, but were connected to drains. Many houses had bathrooms; their floors built of waterproof brick and fitted with drains leading directly to the sewer pipes.

Ruins of a tremendous storehouse for grain, a brick-walled public bath and other huge buildings that scholars believe to have been an assembly hall, state bank and a college are also found.

Archeologists have discovered more places like these on the bank of river Saraswati than on river Sindhu or Indus. After new archeological discoveries, scholars have termed this civilization as Sindhu-Saraswati Civilization, which covers an area including Gujarat in South, Kashmir in the North, and Delhi in the East and Iran in the West.

Editors of Time-Life Books write in ***The Epic of man:***

"Of all the mysteries of civilized man's emergence, that of the Indus Valley is the most complete."

1.3 Spinning wheel.

Professor D.P. Singhal of the University of Queensland, Australia, writes in ***India and the World Civilization***:

"The spinning wheel is an Indian invention."

Apart from the economic significance of spinning wheel in reducing the cost of textiles, it is one of the first examples of belt-transmission of power. The stirrup, certainly the big-toe stirrup, is of second century B.C. Indian origin.

Britannica Concise Encyclopedia states:

"Spinning wheel is an easy machine for turning textile fiber into thread or yarn, which was then woven into cloth on a loom. The spinning wheel was probably invented in India. It reached Europe via the Middle East in the Middle Ages."

Wherever traces of early man were found, there also has been evidence of spun thread or spinning implements. Spindles and spinning are also an integral part to the mythology and folklore of many cultures. Plato likens the axis of the universe to the shaft of a spindle with the starry heavens as the whorl end of his Republic. The Bible mentions spindles and spinning. Spider Woman, a goddess in Navaho culture,

taught them the art of spinning. Arachne challenged the goddess Minerva to a spinning and weaving

contest and was turned into a spider in Greek mythology. In Germanic and Teutonic cultures the three Fates spin, measure and cut the threads of life of mortals. Even our modern fairy tales mention spinning as in Sleeping Beauty, East of the Sun and West of the Moon. Linguistic evidence suggests it came to Persia from India.

The Indian style known as Charkha Wheels, were not rimmed wheels at all, but rather had a string running through holes in the tips of the spokes connecting them in a zigzag fashion, thus supporting the drive band. The drive band was connected to a spindle turned on its side where the whorl might be, and powered by a hand crank. The spinner would turn the hand crank with one hand and spin off of the end of the spindle with the other hand – thus the term Spindle Wheel. While these rimless spindle wheels were in use in Greece, Yugoslavia, Bulgaria, Italy and Switzerland, they did not reach Europe until the late 13th century.

1.4 Steel.

H.H. Wilson, a professor at Oxford wrote (as mentioned in ***Mill's history of India Volume II):***

"Casting iron is an art that is practiced in the manufacturing country (England) only within a few years. The Hindus (Indians) have the art of smelting iron, of welding it, and of making steel, and have had these arts from times immemorial."

Mrs. Manning writes in ***Ancient and Medieval India:***

"The superior quality of Hindu steel has long been known, and it is worthy of record that the celebrated Damascus blades, have been traced to the workshops of Western India. Steel manufactured in Kutchha enjoys at the present-day a reputation not inferior to that of the steel made at Glassgo and Sheffield."

Stated in an excellent presentation of the genesis and growth of iron and steel in India published by Sidhu (1983):

"The antiquity of the Indian process is no less astonishing than in ingenuity. The tools with which the Egyptian carved their obelisks and temples and

covered them with hieroglyphics were made of Indian steel. There is no evidence to show that any of the nations of antiquity besides the Hindus were acquainted with the art of making steel."

The references, which occur in Greek and Latin writings on this subject, served only to reveal their ignorance of it.

In the 12th century, the Arab Edrisi mentioned that the Hindus excelled in the manufacture of iron and that it was impossible to find anything to surpass the edge from Indian steel, and that the Indians had workshops where the most famous sabers in the world were forged, while other Arab records mention the excellence of Hinduwani or Indian steel as discussed by Egerton.

The Periplus mentions that in the first century A.D. Indian iron and steel were being exported to Africa and Ethiopia. Indian metallurgists were highly valued by the Romans, Egyptians and Arabs.

1.5 Perpetual motion.

India supplied the concept of perpetual motion to European thinking about mechanical power. The term *perpetual motion*, taken literally, refers to movement that goes on forever. However, the term more commonly refers to any device or system that perpetually (indefinitely) produces more energy than it consumes, resulting in a net output of energy for indefinite time. The origin of this concept has been traced to India's mathematician-astronomer, Bhaskar II, dated 1150. He described a wheel that he claimed would run forever. It was taken to Europe by the Arabs where it helped European engineers to generalize their concept of mechanical power, and provoked a process of thinking by analogy that profoundly influenced Western scientific views. The Indian idea of perpetual motion is in accordance with the Hindu belief in the cyclical and self-renewing nature of all things.

Villard de Honnecourt in 1235 described, in a 33 page manuscript, a perpetual motion machine of the first kind. His idea was based on the changing torque of a series of weights attached with hinges to the rim of a wheel.

Johann Bessler (also known as Orffyreus) created a series of claimed perpetual motion machines in the 18th century. In the 19th century, the invention of perpetual motion machines became an obsession for many scientists.

Another early prospector in this field was John Gambee. Gambee developed the Zeromotor, a perpetual motion machine of the second kind.

The most commonly contemplated type of perpetual motion machine is a mechanical system which (supposedly) sustains motion indefinitely, despite losing energy to friction and air resistance. A second type of impossible perpetual motion machine is one which does not violate conservation of energy, but produces work by spontaneously extracting heat from its surroundings, thereby cooling them down, and converting the heat energy into mechanical work. Such machines are forbidden by the second law of thermodynamics.

A perpetual motion machine of the first kind produces energy from nothing, giving the user unlimited free energy. It thus violates the law of conservation of energy. A perpetual motion machine of the second kind is a machine, which spontaneously converts thermal energy into mechanical work. When the thermal energy is equivalent to the work done, this does not violate the law of conservation of energy. However, it does violate the more subtle second law of thermodynamics. A more obscure category is a perpetual motion machine of the third kind, usually defined as one that completely eliminates friction and other dissipative forces, to maintain motion forever, due to its mass inertia.

1.6 Gold Digging.

Gold is the essence from which the universe was created. In a dark and lifeless universe, the Creator deposited a seed in the waters He had made from His own body. The seed became a golden egg, bright and radiant as the sun. From this cosmic egg of gold was born the incarnation of the Creator Himself – Brahma. Brahma is referred to as Hiranyagarbha – the one born of gold.

Over millenia, gold has become an inseparable part of the Indian society. Indians see the metal as a symbol of purity, prosperity and good fortune. Though India may not list amongst the major gold producing countries such as South Africa, the United States, Australia, China, Canada, Russia, Indonesia, Papua, New Guinea, Ghana, Brazil, Argentina, etc., yet it accounts for being the largest gold consumer in the world.

The recent World Gold Council figures estimate Indian demand of gold in 2009,will be 26.2 percent of the total world demand. India is estimated to hold more than 11,000 tons of gold.

American authority on civilization, Dr. Will Durant wrote in ***Story of Civilization: Our Oriental Heritage:***

"The Hindus seem to have been the first people to mine gold. Herodotus and Magesthenes tell us of the great gold-digging ants, in size somewhat less than

dogs, but bigger than foxes, which helped the miners to find the metal by turning it up in their scratching of the sand. Much of the gold used in the Persian Empire in the fifth century before Christ came from India."

Added Will Durant:

"These discoveries (Excavating Mohenjo-Daro, Harappa and Lothal) establish in Sind and the Punjab (and Gujarat also) during the fourth and third millenium B.C. of a highly developed city life; with finds like household utensils and toilet outfits; ***gold*** *and silver bangles, ear-ornaments, necklaces, and other jewelry so well finished and so highly polished, says archeologist John Marshall, that they might have come out of a Bond Street jeweler's of today, rather than from a prehistoric house of 5,000 years ago."*

1.7 Diamond cutting.

W. Hershey wrote in ***The Book of Diamonds*:**

"Diamonds are thought to have been first recognized and mined in India, where significant alluvial deposits of the stone could then be found many centuries ago along the rivers, Penner (Panna), the Krishna and the Godavari. Diamonds have been known in India for at least 3000 years but most likely 6000 years. The Arthshastra of Kautilya mentions a diamond trade in India. Golkonda served as an important center for diamonds in South India."

Historian Pliny wrote in ***Natural History:***

"Diamonds have been treasured as gemstones since their use as religious icons in ancient India. Their usage in engraving tools also dates to early human history."

India had remained the only major source of the gemstone until the discovery of diamonds in Brazil. The diamonds reached ancient Rome from India. Diamonds were also discovered around 700 A.D. in Borneo, and were used by the traders of Southeast Asia.

Shortage of diamond led to discoveries in Brazil (1725) and South Africa (Kimbereley 1867). South Africa became the favored center for diamond

resources, and quickly rose as the world's largest diamond producer.

Today, 92 percent of the world's diamonds are cut and polished in India. Some 85 percent of the world's rough diamonds, 50 percent of cut diamonds, and 40 percent of indudtrial diamonds are traded in Antwerp, Belgium. Antwerp's association with diamonds began in the late 15th century when a new technique to polish and shape the gems evolved in this city.

Major business of Antwerp is with India. In the 21st century, the technology to produce perfect diamonds synthetically was developed, and these diamonds are visually identical to mined, naturally-occuring diamonds.

The story of diamond is incomplete without mentioning Kohinoor, weighing 105.60 carats, a diamond from India, is world famous and is now part of the British Crown Jewels. It was captured from king of Malwa in the 16th century by the Mogul Sultan Babar and remained in the possession of later Mogul rulers. Nadir Shah took it to Persia. After the break-up of Persian Empire, the diamond found its way to India. Sikh Raja Ranjit Singh of the Punjab received it in exchange for military help. After fighting broke out between the Sikhs and the British, the East India Company claimed the diamond as a partial indemnity, and then presented it to Queen Victoria in 1850.

2. Language and Literature.

2.1 Alphabet
2.2 Sanskrit Language
2.3 Mother of Human Speech.
2.4 Excellent Language.
2.5 Epics.
2.6 Poetry.
2.7 Drama.
2.8 Fables
2.9 Purans

2.1 Alphabet.

Shyamji Krishna Varma, Oriental Lecturer of Balliol College, Oxford, read a paper before the International Congress of Orientalists at Leiden in 1833, which he attended as a delegate of the Government of India. He proved that the *Art of writing* has been in use in India since the Vedic times.

Prof. Basham, wrote in ***Wonder that Was India*:**

"One of ancient India's greatest achievements is her remarkable alphabet, commencing with the vowels and followed by the consonants, all classified very scientifically according to their mode of production, in sharp contrast to the haphazard and inadequate Roman alphabet, which has developed organically for three millennia. It was only on the

discovery of Sanskrit by the West that a science of phonetics arose in Europe."

Alphabet, in use in India for most of the languages, comes from Sanskrit alphabet. Indian alphabet is the most scientific alphabet. It is possible that Lord Ganesh, who wrote our Vedic literature invented our scientific alphabet. We write *Shri Ganeshay Namah* before we write any letters of ritualistic or religious importance!

However unbelievable this may appear, it has to be admitted that this alphabet is not man-made. Panini's grammar too corroborates the divine origin of this alphabet. Man could not create such a perfect alphabet.

Professor Basham further wrote:

"It will be seen that this alphabet is methodical and scientific, its elements classified first into vowels and consonants, and then, within each section, according to the manner in which the sound is formed. The gutturals are formed by the constriction of the throat at the back of the tongue, the palatals by pressing the tongue flat against the palate, the retro-flexes by turning up the tip of the tongue to touch the hard palate, the dentals by touching the upper teeth with the tongue, and the labials by pursuing the lips."

2.2 Sanskrit laguage.

Western ideas hold on to the dogmatic belief that Sanskrit is one of several ancient languages, descended from another common ancestor. That ancestral language they have never found will never find in the future, because that language is Sanskrit itself.

Famous Sanskrit scholar F. Max Muller called Sanskrit an elder sister of European languages; but he did not call it the mother of languages. American scholar Will Durant said that Sanskrit is the mother of modern European languages. Sanskrit implies that it is a consciously developed and perfected language.

Great Sanskrit scholar Bopp wrote in ***Edinborough Review Volume XXXIII:***

"At one time Sanskrit was the one language spoken all over the world."

French scholar Louis Jacoliot writes in ***Bible in India***:

"Sanskrit is the original source of all the European languages of the present day."

In an essay on ***An Introduction to Linguistic Science,*** it is mentioned:

"After much futile discussion linguists have reached the conclusion that the data with which they

are concerned yield little or no evidence about the origin of human speech."

About all human civilization has originated from India, Godfrey Higgins observed in ***The Celtic Druids:***

"The Peninsula of India would be one of the first peopled countries, and its inhabitants would have all the habits of progenitors of man before the flood in as much perfection or more than any other nation. In short, whatever learning man possessed before his dispersion may be expected to be found here (in India); and of this Hindustan affords innumerable traces.

2.3 Sanskrit is mother of all human speech.

We saw that Sanskrit alphabet is most scientific compared to haphazard Roman alphabet; that Sanskrit grammar of Panini is the most perfect grammar so far; that Sanskrit is the oldest living language: that Sanskrit is the most suited language for computer programming; and that Sanskrit is the mother of modern European languages. Now we will see that Sanskrit is the mother of all human speech. In almost all languages, like Greek, Latin, French, English, Arabic, Urdu, Persian, Inca, Mayan, Slavic, Russian, Hindi, Tamil, Telugu or Malayalam, Sanskrit words are found everywhere. Either people speaking Sanskrit carried them all over the world or Sanskrit was the world language, traces of which linger in all the languages of the world.

When some of the best scholars of linguistics thus openly confess at being baffled at the origin of languages, why not pay a little more serious and sympathetic attention to the consistent and categorical Vedic tradition that human civilization began with a head-start given by divinity by creating the first few generations of human beings equipped with the Sanskrit language and comprehensive Vedic knowledge about running human affairs with their arts and sciences.

The Bible itself admits:

"The whole earth was of one language and one speech." (Genesis 11:1).

That speech was Sanskrit. So far scholars, because of incompetence, vested interests, religious and professional loyalties or sometime out of deliberate design have distorted the facts of evidence about the worldwide prevalence of Sanskrit language in pre-Christian times.

Max Muller, the German Sanskrit scholar in British employment at least realized the importance of Sanskrit in volume I of ***Chips from a German Workshop:***

"Sanskrit, no doubt, has an immense advantage over all other ancient languages of the East. It is so attractive and has been widely admired, that it almost seems at times to excite a certain amount of feminine jealousy. We are Indo-Europeans. In a certain sense we are still speaking and thinking Sanskrit, or more correctly Sanskrit is like a dear aunt to us and she takes the place of a mother who is no more."

But another British scholar Thomas Maurice, editor of seven volumes of ***Indian Antiquities*** mentions in volume IV:

"That Halhead, the first European Sanskrit scholar seems to hint that it (Sanskrit) was the original language of the earth. Other world languages are shattered and twisted bits of Sanskrit."

Latin language did not develop out of Greek. Godfrey Higgins writes in ***The Celtic Druids:***

"There are many objections to the derivation of the Latin from the Greek. Latin exhibits many terms in a more rude form than Greek. Latin was derived from Sanskrit."

About all human civilization having originated from India and Hinduism, Higgins observes:

"The Peninsula of India would be one of the first peopled countries, and its inhabitants would have all the habits of the progenitors of man before the flood in as much perfection or more than any other nation. ... In short, whatever learning man possessed before his dispersion ... may be expected to be found here, and of this Hindustan affords innumerable traces.

2.4 Excellent language.

French historian Alain Danielou writes in ***Virtue, Success, Pleasure, Liberation*** (Dharma, Artha, Kama, Moksha):

> *"Sanskrit, the classical language of (India) Hinduism, is the oldest and the most systematic language in the world. The vastness and the versatility, and power of expression can be appreciated by the fact that this language has 65 words to describe various forms of earth, 67 words for water, and over 250 words to describe rainfall."*

Sir Monier Monier-Williams, professor of Sanskrit at Oxford writes ***Sanskrit-English Dictionary:***

> *"India though it has more than 500 spoken dialects, has only one sacred language and only one sacred literature, accepted and revered by all adherence of Hinduism alike, however diverse in race, dialect, rank and creed. That language is Sanskrit and Sanskrit literature, the only repository of the Veda or knowledge in its widest sense, the only vehicle of Hindu mythology, philosophy, law, the mirror in which all the creeds, opinions, and customs and usages of the Hindus are faithfully reflected and the only quarry whence the requisite materials may be obtained for improving the vernaculars or for expressing important religious and scientific ideas."*

French scholar Jean Le Mee, who studied Sanskrit

at Columbia University, writes in ***Hymns from Rigveda:***

"Sanskrit is the artificial language par excellence, patiently refined sound by sound...embracing all the levels of being physical, emotional, intellectual and spiritual. It is ideally suited to describe and govern the nature of phenomena from the spiritual level to the physical. This range of applicability in the realm of nature paradoxically makes this most artificial language the most natural language, the language of nature."

Georges Ifrah, French historian of Mathematics, writes in ***The Universal History of Numbers:***

"Sanskrit means 'complete,' 'perfect' and 'definitive.' In fact, this language is extremely elaborate, and is capable of describing multiple levels of meditation, states of consciousness and psychic, spiritual and even intellectual processes. Sanskrit has for centuries lent itself admirably to the diverse rules of prosody and versification. Thus we can see why poetry has played such a preponderant role in all of Indian culture and Sanskrit literature."

2.5 Epics.

There are many famous epics like (1). Epic of Gilgamesh (Mesopotamian mythology) (2). Iliad ascribed to Homer (Greek mythology) (3). Odyssey again ascribed to Homer (Greek mythology). (4). Aeneid by Virgil and of course, (5). Indian epic Ramayan by Adi Kavi (First Poet) Valmiki and Mahabharat by editor of Vedas, Veda Vyas.

Remarkable of these epics, Mahabharat has 220,000 lines; Ramayan has 48,000 lines; Iliad has 15,693 lines; Iliad and Odyssey together contain 30,000 lines; and Aeneid has 9,868 lines. Ramayan is the oldest epic, while Mahabharat is the largest. Iliad and Aeneid combined are 25,561 lines. Mahabharat is largest and the second largest is also Ramayan of India.

Professor Monier Williams writes in ***Historical Researches, Volume II:***

"Although the Hindus, like the Greeks have only two great epic poems, namely the Ramayan and the Mahabharat, yet to compare these with Iliad or the Odyssey, is to compare the Indus and the Ganges rising in the snows of the world's most colossal ranges, swollen by numerous tributaries spreading into vast shallows or branching into deep divergent channels, with the streams of Attica or the mountainous torrents of Thessaly. There is, in fact, an immensity of bulk about this, as about every other department of Sanskrit literature, which to a

European, accustomed to a more limited horizon, is absolutely bewildering."

Professor Sylvian Levi of Paris wrote:

"The Mahabharat is not only the largest, but also the grandest of all epics, as it contains throughout a lively teaching of moral under a glorious garment of poetry."

Titus Munson Coan wrote in ***New York Times***:

"The Hindu epics have a nearer significance for us than anything in the Norse mythology. The Mahabharat, one of the longest of these poems, has wider romantic element in it than King Frithiof's Saga; its action is cast upon a grander scale, and its heroes belittle all others in mythology."

Professor M. Williams wrote:

"There are indications in the Indian epics of a higher degree of cultivation that that represented in the Homeric poems. The battle field of the Ramayan and the Mahabharat are not made barbarous by wanton cruelties, and the description of Ayodhya and Lanka imply greater luxury and refinement than those of Sparta and Troy."

Horace Hayman Wilson, an eminent Orientalist wrote in his ***Introduction of Mahabharat***:

"By these means, the merit, both poetical and historical, of the Mahabharat are becoming more

extensively known; but in the amplitude of it, extant in the numerous traditions, legends, and tales, which it contains, and in its many didactic and philosophical paragraphs, it offers an accumulation of materials adopted to different tastes, an auxiliary to diverging researches, which must long advantageously engage the attention, and reward the industry, of Sanskrit scholars."

Barend van Nooten, author of the book – Rig Veda, a metrically restored text with an introduction and notes and the Mahabharat wrote:

"There are near virtual copies of plots, characters, episodes, situations, and time duration from the Mahabharat in Homer and Virgil."

2.6 Poetry.

The poetry of the ancient Indians was the finest of its kind in the world. As Professor Wilson remarked, the poetry of the Hindus can never be properly appreciated by those who are ignorant of Sanskrit. To judge of the merits of Indian poetry from translations is to judge it at its worst. Moreover, owing to the peculiarities of the life and character of the Hindus, Europeans can hardly be expected to fully appreciate and enjoy their poetry; as they can neither fully understand their character, nor fully enter into their feelings and sympathies with them.

Gita Govind is the finest extent specimen of Hindu poetry.

Schlegal wrote in ***History of Literature***:

"Tender delicacy of feeling and elegiac love cast a halo over Indian poetry. The whole is recast in the mould of harmonious softness, and is redolent of elegiac sweetness."

Count Bjornstjerna wrote in ***Theogony of Hindus:***

"Poetry rules over all India; it has lent its forms, its coloring, and its charm ever to the most abstract sciences, yea, even to the religion."

Professor Max Dunker wrote in ***History of Antiquity, Volume IV:***

"The treasures of poetry in India are inexhaustible." Among such a poetical people as Hindus – as German professor Arnold Ludwig (Heeren) aptly terms them – poetry flourished in wonderful literature, and its various branches were cultivated with marvelous success."

Heeren wrote in ***Historical Researches Volume II:***

"The various branches of poetry, such as the narrative and the dramatic, the lyric as well as the didactic and the apologue, have all flourished in Sanskrit literature, and produced the most excellent results. The Hindu lyric surpassed that of the Greeks in admitting both the rhyme and blank verse. It is impossible to read the Gita Govinda without being charmed. It is impossible, however, not to notice the extreme richness of the poet's fancy, the strength and vivacity of his sentiment particularly observable in his delicate taste for the beauties in general, and which not even the ardor of passion was able to extinguish."

2.7 Drama.

Like epics and poetry, the dramatic writings of ancient India were equally remarkable. External nature, as might be expected in a country which is the epitome of the world, is the special forte of the poets of India, and in no country, ancient or modern has nature been treated so poetically. Creation in a perfect harmony with nature is a feature of India's drama. The characters are all perfect creations, and in their fidelity to nature.

The Islamic conquest of India resulted in the effectual repression of Indian dramatic writings. The Indian drama rapidly declined and this fascinating literature was forever lost.

Professor Wilson wrote in Historical Researches Volume II:

"It may also be observed that the dramatic pieces which have come down to us are those of the highest order, defended by their intrinsic purity from the corrosion of time. Among the Hindus, there are nine rasa or effects to be produced on the spectator. They are love, mirth, tenderness, fury, heroism, terror, disgust, wonder, and tranquility."

Sir William Jones wrote in ***Asiatic Researches***:

"The dramatic species of entertainment must have been carried to great perfection when Vikramaditya, who reigned in the first century before Christ gave

encouragement to poets, philologers, and mathematicians. But what a course of preliminary mental improvement must the nation have gone through ere they could possess a writer like Kalidas! Ere they could understand and appreciate his genius."

Great German poet Goethe sang:

"Wouldst thou the young years blossom and the fruit of its decline, and all by which the soul is charmed, enraptured, feasted, fed. Wouldst thou the Earth and Heaven itself in one sole name combine, I name thee, O Shakuntala! And all at once is said."

2.8 Fables.

The Indian achievements in fables establish once for all their intellectual superiority. This literature has made its way to the remotest corners of Europe and America. Its sway over the mind of the civilized world is almost despotic and complete.

Professor Wilsom wrote:

"Fable constitutes with them (Hindus) practical ethics – the science of Nity or Polity – the system of rules necessary for the good government of society in all matters not of a religious nature – the reciprocal duties of the members of an organized body either in their relations. Hence it is specially intended for the education of princes, and proposes to instruct them in those obligations, which are common to them and their subjects and those which are appropriate to their princely office; not only in regard to those over whom they rule, but in respect to other princes, under the contingencies of peace and war. Each fable is designed to illustrate and exemplify some reflection on worldly vicissitudes or some precept for human conduct; and the illustration is as frequently drawn from the intercourse of human beings as from any imaginary adventure of animal existence, and this mixture is in some degree a peculiarity of the Hindu plan of fabling or story telling."

Panchatantra is far and away the best masterpiece in the whole fabulous literature of the

world; nay, it is the source from which the entire literature of fables, Asiatic or European, has directly or indirectly emanated.

Elphinstone wrote:

"In the composition of tales and fables they (Hindus) appear to have been the instructors of the rest of mankind. The most ancient known fables have been found almost unchanged in their Sanskrit dress; and to them almost all the fabulous relations of other countries have been clearly traced by Colebrook, and Professor Wilson."

Dr. W.W. Hunter wrote:

"The fables of animals, familiar to the Western world from the time of Aesop downwards, had their original home in India. The relation between the fox and the lion in the Greek versions has no reality in nature, but it was based upon the actual relation between the lion and his follower, the jackal, in the Sanskrit stories."

2.9 Purans.

Purans are the storehouses like the English Encyclopedia Britannica. They contain dissertations and discussions on theology, mythology, history, war, polity, philosophy, sciences, arts, and genealogy. In course of time, with the decline and fall of the Vedic culture, when the pure and sublime teachings of the Vedas and the Upanishads began to be neglected, interpolations inculcating the worship of different gods and goddesses were made. Thus, the most spiritual and scientific religion in the world was replaced by a mixture of theology, mythology and sociology.

When the Hindus could not defend themselves from the attacks of the invaders, in order to preserve their literature from destruction, they assigned it to the care of a class of men whom they invested with special sanctity and accorded them a privileged position in society. In time, the exclusive spirit of these men urged them to look upon learning as their peculiar prerogative, and induced them, with the object of preserving the sacerdotal character in their class, to gradually put a bar to other classes acquiring Vedic knowledge.

The literal meaning of the word Puran is ancient.

Mrs. Manning wrote in ***Ancient and Indian Medieval India:***

"They are written in verse with a view to public recitation at festivals, as vehicles for conveying such instruction as the people might be presumed to

require." Purans are 18 divided into three classes. (1). Satvic or pure: Vishnu, Narad, Bhagavat, Garud, Padma, and Varah. (2). Tamas or Purans of Darkness: Mstya, Kurma, Linga, Siva, Skanda, and Agni. (3). Rajas or Passionate: Brahmand, Vaivart, Markandey, Bhavishya, Vaman, and Brahma Purans.

The eighteen Purans are said to have 400,000 slokas, or 1,600,000 lines. They are fabled to be amounting to a 10 million stanza.

The 18 Upa-Purans are enumerated as follows: (1) Sanatkumar; (2) Naradiy; (3) Siva; (4) Varun; (5) Aushanas; (6) Aditya; (7) Narsinh; (8) Parashar; (9) Kapil; (10) Samb; (11) Kalik; (12) Bhagavat; (13) Durvasa; (14) Mahesvar; (15) Maanav; (16) Nandi; (17) Saur; and (18)Vashisth.

The Purans are lighthouses to a great ancient past. Agni Puran for instance, contains particulars of the military organization of the Vedic people, which in consequence of the loss of the Dhanurved are of special importance. Dev Puran mentions the Brahmastra, which proves the use of atomic weapons in ancient period.

3. Sciences
3.1 Astronomy.

The learned Count Bjornstjerna writes:

"He (Bailly) further informs us that Laubere, who was sent by Louis XIV as ambassador to the King of Siam, brought home, astronomical tables of solar eclipses, and similar tables were sent to Europe by Patouillet (a missionary in the Karnatic), and by Gentil, which later were obtained from the Brahmans in Tirvalore, and that they all perfectly agree in, their calculations although received from different persons, at different times, and from places in India remote, from each other."

On these tables, Bailly makes the following observation:

"Indian tables give the same annual variation of the moon as that discovered by Tycho Brahe, a variation unknown to the school of Alexandria, and also to the Arabs, who followed the calculations of this school. If it be true that the Hindus more than 3,000 B.C., according to Bailly's calculation, had attained so high a degree of astronomical and geometrical learning, how many centuries earlier must the commencement of their culture have been, since the human mind advances only step by step on the path of science. The quantities, which the Indian tables assign to other astronomical elements, viz., the mean motions

of Jupiter and Saturn, have been found to agree almost exactly not with what is observed at the present time, but with what the theory of gravity shows would have been observed al the beginning of the Kaliyuga."

Baily has shown that the place of the aphelion of Jupiter's orbit, determined by the Indian tables for the beginning of the Kaliyuga agrees with the modern tables of Lalande when corrected by the theoretical equations of La Grange.

The length of the Hindu tropical year as deduced from the Hindu tables is 365-5-50-35, while La Calle's observation gives 365-5-48-49. This makes the year at the time of the Hindu observation longer than at present. It is, however, an established fact that, the year has been decreasing in duration from time immemorial and shall continue to decrease.

Regarding Indian astronomy Sir William Hunter (1840-1900) said:

"In some points the Brahmins made advances beyond Greek astronomy. Their fame spread throughout the West, and found entrance into the Chronicon Paschale The Sanskrit term for the apex of a planet's orbit seems to have passed into the Latin translations of the Arabic astronomers. The Sanskrit uccha became the aux (genaugis) of the later translators... The Arabs became their (Hindus') disciples in the 8th century, and translated Sanskrit treatises, Siddhanats, under the name Sindhends."

Albrecht Weber (1825-1901) writes in ***Indian Literature:***

"The fame of Hindu astronomers spread to the West, and the Andubarius (or, probably Ardubarius), whom the Chronicon Paschale places in primeval times as the earliest Indian astronomer, is doubtless none other than Aryabhatt. Monsieur Bailly inferred from certain astronomical tables of the Hindus, not only advanced progress of the science, but a date so ancient as to be entirely inconsistent with the chronology of the Hebrew Scriptures. All concurred at the time with the wonderful learning, wonderful civilization and wonderful institutions of the Hindus!"

4. Medicine
4.1 Western medicine.
4.2 Surgery.
4.3 Ayurved.
4.4 Dentistry.
4.5 Materia Medica

(1). Greek historian Arian said that the Grecian physicians found no remedy against the bites of snakes; but the Indians cured.

(2). Anticipating August Weismann, by more than 2400 years Atreya held that parental seed is independent of the parent's body and contains in itself, in miniature, the whole parental organism.

(3) As far back as the sixth century B.C., Hindu physicians described ligaments, sutures, lymphatic, nerve plexus, fascia, adipose and vascular tissues, mucus and synovial membranes and many more muscles. They understood different functions of

the gastric juices, the conversion of chime into chyle and this into blood.

(4). From Arabia this system went into Egypt, and the Egyptians in their turn taught it to Hippocrates and Pythagoras, originators of Western medicine.

(5). Dr. William Harvey discovered the circulation of blood in 1628. It seems that he must have his inspiration from earlier Hindu writers, for they gave similar descriptions of circulation of blood in books written many centuries before Harvey was born.

(6). The Hindus were the first scientific and successful cultivators of practical anatomy.

(7). The Ayurveda had bacteriology, as certain from the fact that inoculation for smallpox was known to it hundreds of years before Jenner taught it to Western medicine. Vaccination, unknown to Europe before the 18^{th} century, was known to India as early as 550 A.D.

(8). Hypnotism, as therapy, seems to have originated among the Hindus. The Englishmen, who introduced hypnotherapy into England - Briad, Esdaile, and Elliotson - undoubtedly, got their ideas from India.

(9). That Western medicine, and especially surgery, originated in India is clear by the inclusion of the operation of lithotomy, which could only have come from India.

(10). The knowledge of the Hindu doctors of the variation of the pulse in various diseases was so perfect that they could easily diagnose the disease by it.

(11). Ancient Hindu surgeons performed

even such tricky operations as rhinoplasty, lithotomy, abdominal surgery, caesarean section, removing of the cataract in capsule, and even brain surgery.

4.3 Ayurveda.

The terminology and practice of Ayurveda was prevalent all over the world, before Christ. Very little is known of the history of Europe before Christ and of Middle East before Prophet Mohammed, because on coming to power, they destroyed the old cultures.

After the great flood, people living on the highest mountains were saved, who inherited knowledge from the sages. India gave the world's first administrators, philosophers, scientists, mathematicians, explorers and educators, who carried system of Ayurveda to the world. It is widely acknowledged that the Arabs learned their sciences and arts from ancient India. We know that numerals went from India through Arabs and so far were known as Arabian numbers. Similarly the Arabs studies Ayurveda and imparted medical education and spread it to West. Arabs still follow ancient translations of standard Ayurvedic works.

4.2 Modern surgery.

The Atharvaveda gives an exact enumeration of the bones of the body. Plastic surgery, vaccination, modern plague theory, hospitals, experiments for students on dead bodies or animal bodies or wax images are all traceable to India.

Sushruta was a professor of Surgery in the University of Benaras about 4,000 years ago. His book dealt at length with surgery, obstetrics, diet, bathing, drugs, infant feeding and hygiene, and medical education. Sushruta described many surgical operations - cataract, hernia, lithotomy, and caesarian section, and 121 surgical instruments, including lancets, sounds, forceps, catheters, and rectal and vaginal speculums. He advocated the dissection of dead bodies. He was the first to graft upon a torn ear portion of skin taken from another part of the body. Rhinoplasty descended into modern medicine from him. According to Garrison the ancient Hindus performed almost every major operation.

Limbs were amputated, abdominal sections were performed, fractures were set, and hemorrhoids and fistulas were removed. Sushruta laid down elaborate rules for preparing an operation, and his suggestion that the wound be sterilized by fumigation is one of the earliest known efforts at antiseptic surgery.

Both Sushruta and Charaka mention the use of medicinal liquors to produce insensibility to pain. In

927 A.D. two surgeons trepanned the skull of a Hindu king, and made him insensitive to the operation by administering a drug called Samohini.

For the detection of the 1120 diseases that he enumerated, Sushruta recommended diagnosis by inspection, palpation, and auscultation.

"In the time of Alexander", says Garrison, *"Hindu physicians and surgeons enjoyed a well-deserved reputation for superior knowledge and skill, and even Aristotle is believed by some students to have been indebted to them. Persians and Arabs translated in the eighth century A.D., the thousand-year-old compendia of Sushruta and Charaka. Lord Ampthill concludes that medieval and modern Europe owes its system of medicine directly to the Arabs, and through them to India."*

For cutting instruments, Susruta maintained that Instruments should be of bright handsome polished metal, and sharp enough to divide a hair lengthwise. And no accurate account of any part of the body, including even its skin, can be rendered without a knowledge of anatomy, hence anyone who wishes to acquire a thorough knowledge of anatomy must prepare a dead body, and carefully examine all its parts.

4.4 Dentistry.

Recently the teeth were found in Mehrgarh area of Pakistan, drilled with holes, the age of these teeth being of 9000 years. A dental surgeon could know about the expertise of these ancient dentists, who could drill holes in the teeth, 9000 years ago. It is extremely difficult even today with the electronic equipment to drill a whole in the tooth without disturbing the nerves attached. It is a wonder if dentists could do that with primary drills available those days. The purpose of drilling these holes in the teeth was decorating teeth with gold and diamond studs.

Dr. Arthur Selwyn-Brown, an English dental surgeon writes in ***Physicians through Ages:***

"Dentistry, which is known to the Western countries only for the last 75 to 100 years, was well understood and practiced by the ancient Indian doctors of thousands of years ago."

All the dental disorders mentioned today have been described in Ayurvedic texts. The principles of Ayurvedic dentistry are based on sound scientific principles, which would remain as central truths. Ayurveda believes in treating the man as a whole. Hence dentistry was specially taken up at postgraduate level. Naturally, every Dantashastrajnya, i.e. dentist, was well versed with Ayurvedic medicine and surgery.

These are the chapters of Ayurveda on dentistry: 1:Danta- Teeth: Normal teeth and gums, teeth and

tissues and functions of teeth. 2.Dantaswasthyam- Health and hygiene of teeth: Cleaning of teeth, tooth brush, tooth powder and tooth paste, advantages of brushing, gargling of the mouth, types of gargling, contraindications. 3: Danta-janma- Teething in children: Disorders seen during eruptions of teeth, treatment of disorders associated with teething. 4: Dantamoolaroga -Diseases of gums and roots of teeth: Samvruta Danta - Hypertrophy of gums, Vivruta Danta - Atrophy of gums, Danta-Vaidarbha - Inquiry to the gums, Adhimansa - pericoronitis of wisdom teeth, 5: Dantaveshtha - Chronic suppurative gingivitis, Upakusha - Recurrent acute suppurative gingivitis, Sheetada - Chronic suppurative recessive gingivitis, Soushira - Suppurative periodontitis, Mahasoushira – Necrotizing ulcerative gingivo-stomantitis, Paridara - chronic atrophic gingivitis, 6: Dantanadivrana - Alveolar abscess with sinus, 7: Dantapupputaka - Periodontal abscess, Danta-vidradhi - Alveolar abscess, Dantaman- sabuda - Tumors of the gums, 8: Dantamansasruk - Bleeding from gums, diet useful in bleeding disorders. 9: Dantaroga - Diseases of teeth: classification of diseases of teeth, 10: Danta-Vxkrutayah - Anomalies of teeth, Karala - Malocclusion, Adhidanta - Supernumerary teeth, 11: Shya-vadantaka - Discoloration of teeth, Abhighataja Dantaroga - Traumatic diseases of teeth, 12: Danta Bhanga-Dantabheda, Hanumoksha - Dislocation of tempero-mandibular joint, 13: Dantasharkara - Dental tartar, Kapalika - Tartar with erosion of enamel, 14: Dantashoola - Tooth-ache, Dalana or Sheeta Danta - Enamel erosion with hypersensitivity to cold items, 15: Dantaharsha - Enamel erosion, Krumidanta - Dental

caries, pain associated with dental caries, 16: Bhanjanaka - Pathological fracture of teeth, Chaladanta or 17: Dantashaithilya Periodontosis, Asthiarbuda — Tumors of the bone, Dantashabda and Dantakadkadi Chattering of teeth-bruxism. 18:Chikitsasutrani—Principles of treatment: Dantamansachchedana - Gingivectomy. Dantaroganam Aushadhani - Drugs and Recipes: Specific symptoms and drugs.

Dantodharanam, Extraction of the tooth: Preparation of tooth extraction, process of tooth extraction, and complication of tooth extraction.

One chapter was devoted to the mouth-cavity. Others describe (1) Extractions by forceps, (2) Extractions by elevators, (3) Lancing of the gums, (4) Removal of tartar, and (5) Fitting of artificial dentures. That dentistry must have existed then is certain, for even today, we come across cases in which front teeth are decorated with gold or jewel studs by Indian jewelers.

4.5 Western materia medica.

Thousands of years ago, only in India, materia medica was highly developed and present Western materia medica is highly influenced by ancient Indian materia medica. Western materia medica has borrowed freely from ancient materia medica of India. This is clear from the mention of some essentially Indian drugs, such as Til, Jatamansi, Shringvera and Black Pepper in the medical works of Hippocrates, Dioscorides and Claudius Galen, to whom Western medical science is considerably indebted.

In the course of a lecture, Captain Johnston Saint mentioned:

> *"If then this is what we found in surgery, what we may not find in medicine from India – that vast and fertile country which is a veritable encyclopedia of the vegetable world. The materia medica of the ancient Hindus is a marvel from which both the Greeks and the Romans borrowed."*

Ancient Hindus recognized pharmacy as a complimentary healthcare profession to obtain remedies manily from vegetable sources. Apart from teaching diagnosis and treatement, the students were taught plantation, collection and preparation of drugs. Agnivesh Tantra, was a huge treatise on Indian medicine.

Later revised by Charak, known as Charak Samhita, this deals with vegetable products, animal

and earth products. The drugs were given various forms, such as powders, pastes, infusions, decoctions, pills, confection, roast, fermented, distilled, medicated and alcoholic drinks, medicated oils, inhalents as well as injections into rectum, uthera, female genital organ. Specific drugs were in practice for increasing vigor, restoring youth, improving memory, and preventing diseases.

The student learnt the art of preparing flower juices, and extracting liquors, concocting different herbal combinations, making medicines using sugarcane and clarified butter, reducing to ashes stones, minerals, and the like; preparing combinations of minerals, making new compounds of minerals and extracting alkalis of minerals. Students were also trained in planting and grafting. India with all the periodical seasons of the year, should abound in vegetable drugs. Ancient Indians, took studied and examined all these herbs. The use of gold in certain forms, only recently made by the Western medicine was known to Hindu doctors.

5. Irrigation

5.1 Irrigation.
5.2 River Engineering.
5.3 Dam

The history of irrigation development in India can be traced back to prehistoric times. The Vedas and ancient Indian scriptures have references to wells, canals, tanks and dams which were beneficial to the community and their efficient operation and maintenance was the responsibility of the state. Civilization flourished on the banks of the rivers and harnessed the water for sustenance of life.

According to the ancient Indian writers, the digging of a tank or well was amongst the greatest of the meritorious acts of a man. Brihaspati, guru of Devas, states that the construction and the repair of dams is a pious work and its burden should fall on the shoulders of wealthy men of the land. Vishnu Puran enjoins merit to a person who affects repairs to wells, gardens and dams.

In a monsoon climate and an agrarian economy like India, irrigation has played a major role in the production process. There is evidence of the practice of irrigation even before the establishment of settled agriculture during the Indus Valley Civilization (3000 B.C.). The spread of agricultural settlements to less fertile and irrigated areas led to co-operation in irrigation development and the emergence of larger irrigation works in the form of reservoirs and small

canals. While the construction of small schemes was well within the capability of village communities, large irrigation works were to emerge only with the growth of states, empires and the intervention of the rulers. There used to be a close link between irrigation and the state. The king had at his disposal the power to mobilize labor which could be used for irrigation works.

In the *Rigveda*, there are many references to irrigation. The word *well* frequently occurs there and is described as unfailing and full of water (Rv X 101.6). Macdonnel and Keith find clear references to artificial water channels used for irrigation as practiced in the times of the Rigved. In the *Atharved* also such references do exist (3:13). There is a reference to a reservoir in the *Mahabharat*. The great sage Narad, who came to see the Emperor Yudhisthir, around the year 3150 B.C. asked him:

"Are the farmers sturdy and prosperous? Are the dams full of water and big enough and distributed in different parts of the kingdom?"

From the humble but rapidly advancing beginning of the Mehrgarh, (6000 B.C.) came the eventual arrival of the early Harappan. (4000 B.C. to 3000 B.C.). The early Harappan evidenced very densely packed villages and village centers, all with extensive irrigation systems, and much the same subsistence pattern as the Mehrgarh.

L. Plam proposes that there were different forms of irrigation in Sindh, Kohistan, and along the Kirtar front during the Early Harappan and Mature Harappan

periods.

5.2 River Engineering.

Recently Prime Minister of India, Manmohan Singh declared Ganga a "National River" of India. Holy River Ganga in our legends is said to have been brought down to the Earth by a very ancient king named Bhagirath, and therefore Ganga is called Bhagirathi. The effort of bringing Ganga down to plains from Himalay is known as Bhagirath Prayatna and the term is used for any difficult job. The term also indicates that it was king Bhhagirath's extraordinary effort to bring the waters of Ganga to plains of India.

This is the biggest and most valuable civil engineering marvel of the world. The focus here is to look at Ganga and efforts of Bhagirath and his predecessors in bringing Ganga down from Himalayas to the plains and whether there was indeed civil engineering or river engineering work of a massive magnitude involved in channelising the river Ganga.

The British colonial surveyors in India from the late 1700s, in their quest for the origin of the Ganga River, have done extensive survey of the Himalayan region. Some of the illustrious surveyors were Captain Herbert, Rennel, and Sir William Willcocks. They and other surveyors have recorded their findings in journals of their times. They emphatically and unambiguously state that river Ganga is not a natural river, but a man-made river by the ancients of India. It started as a canal along with many other canals dug by the ancient engineers of India.

5.3 Dam.

Dams generally serve the primary purpose of retaining water, while dikes are used to manage water flow into specific land regions. Hydroelectricity is often used in conjunction with dams to provide clean electricity.

The Grand Anicut, Kallanai, is the oldest dam in the world in use today. It is located on river Kavery, about 15 miles from Trichirapalli, Tamilnadu. This is one of the greatest engineering marvels of India. The Kavery is a perennial river in the south plateau, which starts near Mysore in a place called Talaikavery then flows to Salem and Karur. The Kavery delta area was often subjected to floods in the older days, and Karikal Cholan built this dam to divert flow to Kollidam, a branch.

It was built in 2nd century B.C. by unhewn stones across the historic Kaveri River. It is 329 meters long and helps in the irrigation of 1,000,000 acres of agricultural land. It is the only oldest dam still in use by the government of Tamilnadu, India.

6.0 Shipping
6.1 Naval
6.2 Dockyard

6.1 Shipping.

Indian shipping has a long and brilliant history covering a period of more than five millennia from the very dawn of civilization. Hindu texts are replete with references to the sea-borne trade of India that directly and indirectly demonstrate the existence of a national shipping and shipbuilding activity.

The *Ramayana* refers to Yavadwipa (Java), Suvarnadwipa (Sumatra) and Lohit-Sagar (Red Sea). The symbolism of ships is as pervasive in the Vedas as that of the sea. Vedic culture was a maritime culture, and Vedic people lived by the sea. Rig Veda (VII.88.3 and 4) alludes to a voyage undertaken by Vasishtha and Varuna in a ship skillfully fitted out. Another stanza (1.116.3) mentions a naval expedition on which Tugra, the Rishi king, sent his son Bhujyu against some of his enemies in the distant islands; Bhujyu, however, is ship-wrecked by a storm, with all his followers, on the ocean, where there is no support, no rest for the foot or the hand, from which he is rescued by the twin brothers, the Asvins, in their hundred-oared galley. In the *Kishkindha Kand of Ramayan*, Sugriva, the Vanar King, in giving directions to Vanar leaders for the quest of Sita, mentions, all to go to the cities and mountains in the islands of Indonesia, Coast

of Red Sea, and even China.

In the *Mahabharata*, during Rajasuya Yagnya of Yudhisthir and during Digvijaya of Arjuna and Nakula travels outside of country are mentioned. In *Sabha Parva*, Sahadeva is mentioned as going to several islands in the sea and his defeating several kings. In *Drona Parva*, there is a passage alluding to shipwrecked sailors who are safe if they get to an island. There is another passage referring to a tempest-tossed and damaged vessel in a wide ocean. In the *Karna Parva*, the soldiers of the Kauravas are described as merchants, whose ships have come to grief in the midst of the unfathomable deep. In the same *Parva*, a shloka describes how the sons of Draupadi rescued their maternal uncles by supplying them with chariots, as the ship-wrecked merchants are rescued by means of boats. But the most interesting passage is that which refers to the escape of the Pandavas from the destruction planned for them in a ship that was secretly and especially constructed for the purpose under the orders of the kind-hearted Vidura. The ship was of a large size, provided with machinery and all kinds of weapons of war, and able to defy storms and waves.

Yukti Kalpa Taru is an ancient Indian text on Ship-building. The *Yukti Kalpa Taru* gives sufficient information and date to prove that in ancient times, Indian shipbuilders had a good knowledge of the materials which were used in building ships. Apart from describing the qualities of the different types of wood and their suitability in shipbuilding, the Yukti Kalpa Taru also gives an elaborate classification of ships based on their size.

The word ***navigation*** comes from Sanskrit word *nau gati*. Taking a close look at our nation's maritime history we find evidence of a very large number of Indians that had crossed the seas to trade and build empires in distant lands. These enterprising Indians, spread Indian culture overseas. In those days, India had colonies in Cambodia, Java, and Borneo, Japan and even in South America.

Indian traders had established settlements in Southern China, in the Malayan Peninsula, in Arabia, in Egypt, in Persia, etc. Ships that undertook sea voyages were of two types. *Dirgha* were ships which had a long and narrow hull and the *Unnata*. Sanskrit and Pali literature has innumerable references to the maritime activity of Indians in ancient times. There is also one treatise in Sanskrit, named *Yukti Kalpa Taru* which has been compiled by a person called Bhoja Narapati. The *Yukti Kalpa Taru* had been translated and published by Prof. Aufrecht in his Catalogue of Sanskrit Manuscripts.

A panel found at Mohenjodaro depicted a sailing craft. Vessels were of many types. Their construction is vividly described in the *Yukti Kalpa Taru.* It sets forth minute details about the various types of ships, their sizes, materials from which they were built. The treatise also gives elaborate directions for decorating and furnishing the ships with a view to make them comfortable for passengers.

6.2 Naval dockyard.

Near in Gujarat, India, lay a landmark of Indian maritime history. Archeologists believe the first dockyard in the world was built in Lothal. A port city, Lothal was the focal point of Saraswati-Sindhu (Indus) civilization. Built here was the earliest known dock in the world, equipped to berth and service ships. Lothal engineers studied tidal movements and their effects on brick-built structures and constructed kiln-burnt brick walls.

Archeologist S.R. Rao, who excavated Lothal site, writes:

"Lothal dockyard had features which in terms of height, width, and length, compared favorably with the modern dockyards of Mumbai and Vishakhapatnam."

Boats of 60-75 tons capacity and 20-25 meters in length could enter Lothal dock, which was designed to ensure berthing 20-30 boats. Large foreign and Indian ships could enter the harbor without any difficulty. The Harappan merchants and navigators were familiar with Indian Ocean routes and overseas markets. In those days, Indians traded with countries like Mesopotamia (Iraq), Qatar, Persia and Egypt.

The brick-laid docks, wharfs, jetties and warehouses provided infrastructure facilities to the inland and maritime trade, while bullock-carts provided transportation. Added to this, the Harappans' knowledge of weight and measures, which enabled

customs officials to count and collect revenues from imports and exports, and an administrative set-up of sophistication.

Dating from 2400 B.C. or earlier, it is one of India's most important archeological sites. Discovered in 1954, Lothal was excavated from 1955 to 1960 by the Archeological Survey of India (ASI). Lothal's dock, the world's earliest known, connected the city to an ancient course of the Sabarmati (Subhramati) river on the trade route between Harappan cities in Sindh and the peninsula of Saurashtra when the surrounding Kutchha desert of today was a part of the Arabian Sea. It was a vital and thriving trade center in ancient times, with its trade of beads, gems and valuable ornaments reaching the far corners of West Asia and Africa. Lothal provides with the largest collection of antiquities in the archeology of modern India. Their work in metallurgy, seals, beads and jewellery was the basis of their prosperity.

Harappans were attracted to Lothal for its sheltered harbor, rich cotton and rice-growing environment and bead-making industry. The beads and gems of Lothal were in great demand in the West.

7.0 Fine Arts
7.1 Music.

Anne C. Wilson wrote in ***A Short Account of the Hindu System of Music:***

"It must be a secret source of pride to Hindus (Indians) for them to know that their system of music as a written science is the oldest in the world. Its principal features were given long ago in Vedic writings, and are still in use in their original construction at the present day."

Music has been a great favorite with the Indians from the earliest times. Even the Vedas subscribed to this divine art. The enormous extent to which the Indians have cultivated this science is proved by their attainments in it. But the masterpiece on this science and art combined, the Gandharvaveda is lost and references to it in Sanskrit works alone remain to point to the high principles on which the Indian science of music was based.

Arthur Whitten, comparing Indian and Western music wrote in ***The Music of the Ancients:***

"I have yet to observe that while our system of notation admits of no sound of less than half a tone, the Indians have quarter tones, thus rendering it a most difficult imitation by Europeans. The execution of their music seems to be impossible to all except those who commence its practice from a very early age."

Professor Weber explains how Indian music went to the West. He wrote in ***Indian Literature:***

"According to Von Bohlen and Benfey, this notation (Western) passed from the Hindus to the Persians and from these again to the Arabs, and was introduced into European music by Guido d'Arezzo at the beginning of the eleventh century."

Professor Weber explains how Indian music went to the West. He wrote in ***Indian Literature:***

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The oldest music is still the youngest.

8.0 Games
8.1 Chutes and Ladders game.

"Chutes and Ladders" – known in India as "Snakes and Ladders", is a children's game that is played by two or more on a square board with 100 numbered squares that ascend in rows and often contain pictures. On some squares, there are ladders that connect a square on a higher row on the board; other squares contain snakes that similarly connect squares on different rows.

The game of "Snakes and Ladders" originated in ancient India as *Parampada Sopanam* meaning *the ladder to salvation*. Indian spiritual leaders invented it to teach children about the rewards of good deeds and the negative consequences of bad ones. The snakes represent vices and poor decisions, and the ladders represent virtues and sound morality. The game first made its way to England in 1802, and was commercially sold in the United States in 1943 by Milton Bradley under the name ***Chutes and Ladders***. It often has been assumed that Square 100 represents the India's Vedic idea of Nirvana or Moksha. *Snakes and Ladders* is known by many different names around the world. Some of these include: "Ups and Downs" (Canada), "Jungle Run" (US), and "Walt Disney's Steps and Chutes" (UK).

This ancient game was also known as *Moksha-Patamu* in South India. The squares of virtue on the original game are faith (12), reliability (51), generosity (57), knowledge (76), asceticism (78); the squares of evil are disobedience (41), vanity (44), vulgarity (49), theft (52), lying (58), drunkenness (62), debt (69), rage

(84), greed (92), pride (95), murder (73), and lust (99). This Indian game was used to teach children about the religion in that good squares allow a player to ascend higher in the league of life whereas evil reduces a player back through reincarnation to lower tiers of life.

Penitence, Thrift and Industry elevated a player up a ladder to squares labeled Grace, Fulfillment, and Success; while Indolence, Indulgence and Disobedience slid a player down to Poverty, Illness and Disgrace. The number of ladders and snakes were also equalized. The game still exists in the West and in India.

Snakes and Ladders game was based on morality and was called *Vaikunthpaali,* also *the ladder to salvation*. The game was played widely in ancient India by the name of *Moksha Patamu*.

9.0 Education

9.1 First university.

More than 2700 years ago, a great university existed in ancient India, where 10,500 students from across the world came for higher studies. This was the Takshashila University of ancient India, wrongly spelled as Taxila today. Takshashila is currently in Pakistan and gets its name from Taksha, who was the son of Bharat, the brother of Suryavanshi Ram Dasharathi. Whether Takshashila University was founded in vary ancient times 5000 to 6000 years ago is not known today as it needs more archeological excavations and study. But this is a possibility as archeological evidence of existence of well-developed dentistry of 7000 B.C. in this area is found. The

kingdom of king Taksha included modern-day Uzbekistan.

Students from all across the world used to come to Takshashila University to attain specialization in over 64 different fields of study including the study of Vedas, grammar, philosophy, *ayurveda* (medicine), agriculture, surgery, politics, defense warfare, mathematics, astronomy, commerce, futurology, music, dance, dramatics, etc. Students were admitted at the age of 16 after they had completed their basic education at local institutions. Every single graduate, who passed out of this University, would become a well sought-after scholar all across the subcontinent. Admission into this university was purely based on merit.

Some of the students, who graduated out of the Takshashila University, included the great political master Chanakya (also known as Kautilya), who authored the world's finest work, *Arthashastra*, on political duties, statecraft, economic policies, state intelligence, administrative skills, and military strategy. *Arthashastra* consists of 15 volumes. Chanakya guided Chandragupta Maurya as a mentor who founded the great Mauryan Empire and also served as the Prime Minister of the Empire; Vishnu Sharma, the author of great book that teaches the art of political science in the form of simple beautiful stories called *Panchatantra* (meaning *five techniques*). Charak, the famous ancient Indian Ayurvedic physician, who authored the *Charak Samhita*, simplifying an even older Ayurvedic work called the *Agnivesh Samhita*, which along with Sushrut Samhita, Ashtang Sangrah and Ashtang Hrudayam. Jivak, a

doctor and expert in pulse reading whose area of specialization was *Pancha karma, Marma and shalya* (surgery). Jivak was the personal physician of Buddha and cured the Nadi Vran of Buddha. There are over 15,000 handwritten manuscripts of Jivak's expertise passed on by generations to their children and are still preserved in India even today. Philosophers gathered at Takshashila to have their own schools of thoughts and great scholars imparted instructions in military science, medicine, political science, philosophy, religion, language, literature, and grammar. Other famous products from this University were Jovial, commander-in-chief of Benares King, King Prasenjit of Koshal (modern Ayodhya); Prince Chandragupta, founder of Mauryan Empire and Paatanjali, author of Paatanjali Yogasutra.

Historically, Takshashila lay at crossroads of three major trade routes: the Royal highway from Patliputra; the north-western route through Bactria, Kapisa, and Pushkalavati, and the route from Kashmir and Central Asia via Srinagar, Manshera and the Harpur Valley across the Khunjerab pass to the Silk Road.

In 1980, Takshashila was declared a UNESCO World Heritage site. Takshashila is considered a place of religious and historical sanctity by Hindus and Buddhists. The former do so because Takshashila was the seat of Vedic learning, and the strategist Chanakya, who helped consolidate the empire of Emperor Chandragupta Maurya was a senior teacher there. The institution is very significant in Buddhist tradition since it is believed that the Mahayan sect of Buddhism took shape there.

10.0 Science
10.1 Military Sciene.

The Indian Armed Forces are the overall unified military of the Republic of India encompassing the Indian Army, the Indian Air Force, the Indian Navy, and the various other inter-service institutions. The President of India serves as the de jure Commander-in-Chief of the armed forces while the de facto executive power is held by the Union government headed by the Prime Minister of India. With an estimated total active force of 1,325,000 personnel, India maintains the world's third largest armed forces.

Undergoing rapid expansion and modernization, the Indian Armed Forces plan to have an active military space program and are currently developing a potent missile defense shield and nuclear triad capability.

War as an art, as well as a science, was equally well understood in ancient India. The nation, which overran nearly the whole of the habitable globe and produced great warriors, could scarcely be considered inferior to any other people in their proficiency in military science. Being skillful sailors from time immemorial, the Indians were adept at naval warfare, also.

Colonel Tod wrote in ***Annals of Rajasthan:***

"The Hindus of remote ages possessed great naval power."

India was the greatest commercial nation in the ancient world and was compelled to keep strong navy. Strabo mentions a naval department in army.

Dr. Sir W. Hunter wrote in ***Asiatic Researches:***

"There was no want of a theory of regular movements and arrangements for the march, array, encampments, and supply of troops. They are all repeatedly described in Mahabharat."

Ward writes in ***Theosophist*:**

"The Hindu did not permit even the military art to remain unexamined. It is very certain that the Hindu kings led their own armies to the combat, and that they were prepared for this important employment by a military education; nor is it less certain that many of these monarchs were distinguished for the highest valor and military skill."

In the *Mahabharat*, Yudhisthir suggests to Arjun the adoption of the form of *Suchimukh*, or the needle points array, similar to the phalanx of the Macedonians, while Arjun recommends the Vajra or thunderbolt array. Duryodhan suggests Abhedya or the impenetrable. In their land army, the ancient Indians had, besides the infantry and cavalry, elephants and chariots also.

Sir Charles Napier wrote:

"Better soldiers or braver men I never saw, superior in sobriety, equal in courage, and only inferior in muscular strength to our countrymen."

Clive, Lawrance, Smith, Coote, Haliburton and many others speak of the army in the highest terms. Ctesias mentions that the Indian swords were the best in the world.

The following fivefold classification of India's weapons is exhaustive. 1. Missiles thrown with an instrument or engine called Yantramukta. 2. Those hurled by hand or hustamukta. 3. Weapons which may or may not be thrown or muktamukt, as javelins, tridents, etc. 4. Which are not thrown, as swords, maces, etc. 5. Natural weapons, as fists etc. 6. *Bhindipal, Tomar, Narac. Pras, Rsti, Pattis, Krpan, Ksepani, Pas*, etc. are arms of the ancient India, now extinct.

11.0 Government

11.1 Self-Government and Democracy.

Dr. Will Durant wrote in ***The Case for India:***

..... India is mother of us all through the village community of the self government and democracy."

India is the seventh largest and second-most populous country, with more population, more religions, more languages, and more states than Europe has. Still, has one common market, one currency, one single prime minister, one nationally elected parliament, one constitution and one Supreme Court. Europe has been seeking this political and economic unity for 2000 years but has only slightly succeeded.

Republics existed in India for more than 1000 years, from Sixth century B.C. in the days of Buddha,

until five centuries after Christ. No other country, modern or ancient, has this record. India is pre-eminently agricultural country and most people derive their subsistence from soil and live in villages. These villages had their own governments and seem to last, where nothing else lasts. Dynasty after dynasty tumbled down, rulers after rulers changed, revolution after revolution succeeded, but the village community remained unchanged. From time immemorial, these villages have chosen their own officials and managed their own affairs.

Sir Charles Metcalf, the Governor of Madras wrote that ***Villages of India are little republics***.

Professor Jabez T. Sunderland wrote in ***India Under Bondage:***

"Ethnological, linguistic and other forms of historical research make it clear that the democratic and republican institutions of Europe and America actually send their roots to Asia and especially to India. India is the natural home of liberty, of democratic government and of self-government. Where did our colonial town-meeting system come from? Our historians trace it to England, and beyond that to Germany. But they cannot stop with Germany. To find, they are obliged to go to Asia and especially to the village republics of India."

12.0 **Bibliography:**

1. Ancient Law by Sir Henry James Summer.
2. *Ancient and Medieval India* by Professor Heeren.
3. Annals of Rajasthan by Colonel Tod.
4. A History of Sikhs by General Joseph Cunningham.
5. Indian Antiquities by Thomas Maurice.
6. Article in Hindustan Times by Rizwan Salim.
7. A Short Account of The Hindu System of Music.
8. Asiatic Researches by Sir William Hunter.
9. Address by Arnold Toyanbee.
10. *Ancient and Medieval India* by Mrs. Manning.
11. *Asiatic India* by Philip Rawson.
12. Astronomy by Count Louis Harmon Cheiro.
13. Astronomical Researches by Sir William Hunter.
14. Bible in India by Louis Jacolliot.
15. Book of Diamonds by W. Hershey.
16. British History of India by Thomson.
17. Britannica Concise Encyclopedia.
18. Case for India by Will Durant
19. Cotton as World Power by Dr. James AB Scherer.
20. Cultural History of India by Professor A. L. Basham.
21. Cosmos by Carl Sagan.
22. Cotton Manufacturers of Dacca by Both.
23. Eastern Origin of the Celtic Nations by James Cowles.
24. Edinborough Review by Professor Wallace.
25. Edinborough Review Volume XIII1951.
26. Effects of Colonization on India by Michael Danino.
27. Encyclopedia of Ignorance by Dr. Donald C.

Jonson.

28. Following the Equator by Mark Twain.
29. Great Secret by Maurice Materlinck.
30. Hinduism Today, December 1999.
31. Hindu-Muslim Cultural Accord by Syed
32. History by Herodotus.
33. History of India by James Mill.
34. Historic India by Arthur Shopenhauer.
35. Historic India by Lucille Schulberg Time-Life Books.
36. History of India by Sir Elliot and Professor Dawson.
37. History of Domesticated Animals.
38. History of India by Elphinstone.
39. History of India by Murray.
40. History of India by Dr. Tennent.
41. History of India by Professor Highbridge.
42. Imperial Gazzettier by Sir W. Hunter.
43. India under Bondage, Governor Thomas Munro's Quote.
44. India and the World Civilizations by Professor D.P. Signal
45. India in Bondage by Jabez T. Sunderland.
46. INDIA by Professor Stanley Wolpert.
47. Indian Literature by Albecht Weber.
48. Indian Wisdom by Professor Monier Williams.
49. Introduction to India by Stanely Wolpert.
50. JRAS Volume XVII by Spottiswoode.
51. Library of Nations by George Constable for Time-Life Books.
52. Lemon: Fruits of Warm Climate by Julia F. Morton.

53. Mill's India Volume II by Bancroft.
54. Mill's History of India Volume II – Professor Wilson.
55. Miscellaneous Essays by Colebrook.
56. Music of the Ancients by Arthur Whitten.
57. Natural History by Pliny.
58. Our Oriental Heritage by Will Durant.
59. Peoples of India by William Harten Gilbert.
60. People and Government of Hindustan by Orme.
61. Physician Throuout the Ages. Dr. Arthur Selwyn-Brown.
62. Prehistoric Civilization of the Indus by Sir John Marshall.
63. Quote in Library of Nations-India by Mark Twain.
64. Sacred Books of the East by Max Muller.
65. Sanskrit-English dictionary by Sir Monier Monier-Williams.
66. Short Cultural History of India by Professor H.G. Rawlinson.
67. Spiritual Heritage of India by Huston Smith.
68 . Textiles Manufacturers of India by Dr. Forbes Watson.
69. The Celtic Druids by Godfrey Higgins.
70. The First Cities by Dora Jane Hamblin of Time-Life Books.
71. The West Minster Gazette by J.A. Spender.
72. United Nations News by Beatrice Pitney Lamb.
73. The Aryan Myth by Leon Poliakov.
74. The True Origin of the Lemon Tree by Mona Way Anjou.
75. The Quest to Think the Unthinkable by Brian Clegg.

76. Theogony of Hindus by Count Bjornstjerna.
77. The Universal History of numbers by Georges Ifrah.

78. What India can teach us! by Max Muller.
79. Wonder That Was India by Dr. Arthur L. Basham.
80. World Brotherhood by Jabez Sunderland.

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13.0

Will Durant, American historian, who was awarded Pulitzer Prize in ***Story of Civilizations:Our Oriental Heritage:***

"It is true that even across the Himalayan barrier India has sent to us such questionable gifts as grammar and logic, philosophy and fables, hypnotism and chess, and above all, our numerals and our decimal system. But these are not the essence of her spirit; they are trifles compared to what we may learn from her in the future. As invention, industry and trade bind the continents together, or as they fling us into conflict with Asia, we shall study its civilizations more closely, and shall absorb, even in enmity, some of its ways and thoughts. Perhaps, in return for conquest, arrogance and spoliation, India will teach us the tolerance and gentleness of the mature mind, the quiet content of the unacquisitive soul, the calm of the understanding spirit, and a unifying, pacifying love for all living things."

25711798R00112

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Middletown, DE
08 November 2015

World's Debt To India!

I first became acquainted with Niranjan Shah through his wonderful weekly column A Letter from Grandpa in India Tribune. Being an avid researcher and writer about India myself, his articles always piqued my interest, letting us know aspects of India that we had never heard about before. I encouraged him to write his findings in a book, or even several books. This book will bring to light India's importance to the progress of civilization.

— **Stephen Knapp, Vedic scholar, author, speaker**

Let us summarize the world's debt to India. As well as her special gifts to Asia, India has conferred many practical blessings on the world at large; notably rice, cotton, the sugar cane, many spices, the domestic fowl, the game of Chess, and, most important of all, the decimal system of numeral notation, the invention of an unknown Indian mathematician.

— **Dr. A.L. Basham, Professor at Australian National University, Canberra, Australia in "Wonder that was India"**

Indic civilization has enriched every art and science known to us. Thanks to India, we reckon from zero to ten with misnamed "Arabic" numerals and use a decimal system without which our modern computer age would hardly be possible. Ancient Indians were the first humans to spin and weave cotton into cloth that continues to provide our most comfortable summer attire.

— **Stanley Wolpert, Professor of History at University of California, in "INDIA".**

Niranjan Shah, a retired engineer, is an author of 12 books, columnist of about 500 articles in various newsweeklies. He has given about 75 talks including one at United Nations. We are very happy to publish this book being created by Createspace, an Amazon.com Company.

— **Dilip Doctor M.D. and Dipika Doctor M.D. for International Vedic Vision, New York, USA**

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ISBN 9781518603990